

FINANCIAL HISTORY

THE MAGAZINE OF THE MUSEUM OF AMERICAN FINANCE



Mobilizing US Business for the Great War

Where are They Now? The Syndicate of the 1956 Ford IPO

From Head Shops to Whole Foods

ISSUE 123 | FALL 2017

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Reeded Edge, 887 Thous.
MS63 NGC**

Realized: \$235,000 | August ANA Denver

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MS62 Brown NGC**

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September Long Beach Expo



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Realized: \$144,000

September Long Beach Expo

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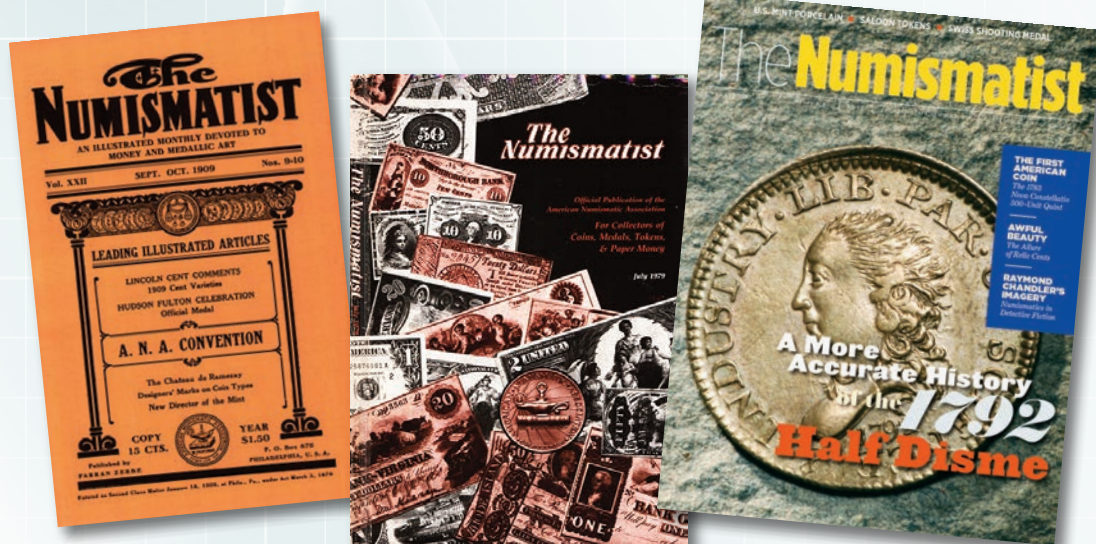
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FINANCIAL HISTORY

THE MAGAZINE OF THE
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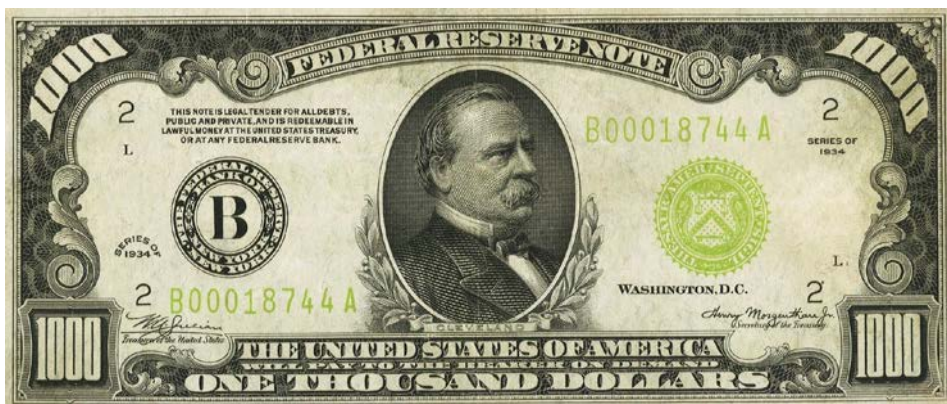
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World War I poster issued by the National Industrial Conservation Movement, which shows Uncle Sam firing a cannon labeled "American industry" shooting supplies and munitions to "The Allies" on a distant shore, 1917. See article, page 16.



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Fall Programs Include Expanded Museum Finance Academy and Conference on “Restoring American Economic Dynamism”

FALL HAS ARRIVED, and with it has come a steady stream of student visitors to the Museum. In addition to those participating in our tours, scavenger hunts and classroom programs, we have also welcomed a new crop of high school juniors

exploring several other potential outputs for this research as well.

Another highlight of our fall season will be a full-day symposium that we are presenting in partnership with the CFA Institute Research Foundation, S&P Global and McKinsey Global Institute on November 28. The topic, “Restoring American Economic Dynamism,” is of critical national importance. More than a dozen leading economists, policy makers

and scholars will gather at the Museum to discuss the true economic challenges facing America and offer fresh solutions for bringing back American prosperity and growth. Participants include Edmund Phelps (Nobel Prize in Economics, 2006), Lord Mervyn King (former Governor of the Bank of England) and David Blitzer

(Chairman of the Index Committee, Dow Jones Indices). More information can be found at www.moaf.org/2017symposium.

Planning is also well underway for our 2018 Gala, which will be held on Tuesday, February 6. We are excited to honor former US Treasury Secretary Tim Geithner with the Whitehead Award for Distinguished Public Service and Financial Leadership, and Citadel Founder and CEO Ken Griffin with the Schwab Financial Innovation Award. We are looking forward to a wonderful evening of cocktails at the Museum and dinner at Cipriani Wall Street, with proceeds funding the Museum’s programmatic and educational offerings.

And, finally, I would like to welcome our newest Board member, Elizabeth O’Melia. Liz is the Chief Financial Officer for S&P Global Ratings, and we are very excited to have her on board. \$



Message to Members

David J. Cowen | President and CEO

and seniors to our personal finance after-school program, the Museum Finance Academy. This eight-week certificate course, which is free for students, has become so popular that we were able to fill a second section of the course this fall. The students participate in a mix of classroom programs and field trips to financial destinations, including the New York Stock Exchange, and the top performers receive partial college scholarships.

This fall we are also excited to announce that we are nearing completion of a large-scale research project, called “Where Are They Now?” The concept for this unique project on the history of investment banking—which traces the history of the 200+ firms on the 1956 Ford IPO tombstone—came from Chuck Royce of the Royce Funds, who also generously funded the project. The research and writing for this richly-detailed project has been done by Professor Susie Pak, and we are proud to feature the first article from our “Where Are They Now? Series” in this issue of our magazine (see page 12). We are currently



Students in the Museum Finance Academy tour the NYSE floor.



**NOV 1
1999**

The Dow Jones Industrial Average replaces four old companies—Chevron, Goodyear, Sears and Union Carbide—with four hot growth stocks—Home Depot, Intel, Microsoft and SBC Communications.

**NOV 6
1957**

Hewlett-Packard Co. goes public.

Museum to Honor Ken Griffin and Timothy Geithner at 2018 Gala

THE MUSEUM will honor the achievements of financial leaders in both the public and private sectors with two important awards at its 2018 Gala on Tuesday, February 6. The Gala is the Museum's main annual fundraiser, with proceeds helping to support all aspects of the Museum's efforts to teach the relevance of finance to everyday life.

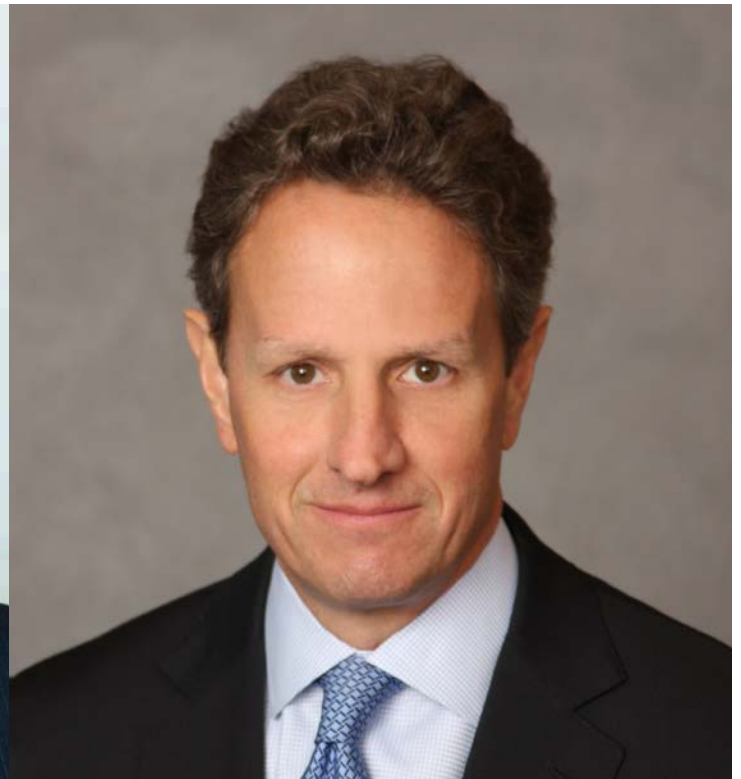
Since 2008, the Museum has recognized the outstanding achievements of individuals who have demonstrated their professional commitment to a culture of

service and have achieved distinction in both the public and private sectors with the Whitehead Award for Distinguished Public Service and Financial Leadership. Timothy Geithner, former US Treasury Secretary and president of Warburg Pincus, will be the recipient of the Whitehead Award at the 2018 Gala.

The Gala also features the Charles Schwab Financial Innovation Award, paying tribute to an individual who has significantly advanced the world of finance—and the economy—through a

creative approach to products, markets and financial technology. Ken Griffin, founder and CEO of Citadel, will be honored with this award for his innovations in investment management.

The 2018 Gala will begin with cocktails at the Museum at 6:30 pm and dinner at Cipriani Wall Street at 7:45 pm. Please contact Mindy Ross, Director of External Relations, at mross@moaf.org or (646) 833-2755 to reserve a table or seat, or to make a contribution. For additional information, visit www.moaf.org/gala. \$



Ken Griffin (left), founder and CEO of Citadel, will receive the 2018 Schwab Financial Innovation Award.
Timothy Geithner (right) will receive the 2018 Whitehead Award.

**NOV 14
1972**

The Dow Jones Industrial Average closes above 1000 for the first time after coming close to that level in 1966, 1968 and 1969. It finishes the day at 1003.16.

**NOV 30
1988**

Kohlberg Kravis Roberts & Co. (KKR) wins a bidding war to do a leveraged buyout of RJR Nabisco for more than \$25 billion. This generates more than \$1 billion in fees for Wall Street and creates the high-watermark for the LBO craze and junk bond binge of the 1980s.

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**DEC 6
1974**

Ferdinand de Lesseps' Compagnie Universelle du Canal Interoceanique, organized to finance the building of the Panama Canal, goes public in Paris at 500 francs (\$100) a share. More than 100,000 people buy into the IPO, but the company collapses and the shares are worthless within eight years.

Columbia University Press Launches Series on the History of US Capitalism

CAPITALISM HAS SERVED as an engine of growth, a source of inequality and a catalyst for conflict in American history. While remaking our material world, capitalism's myriad forms have altered—and been shaped by—our most fundamental experiences of race, gender, sexuality, nation and citizenship.

Columbia University Press recently launched the “Columbia Studies in the History of US Capitalism Series,” a book series that takes the full measure of the complexity and significance of capitalism, placing it squarely back at the center of the American experience.

By drawing insight and inspiration from a range of disciplines and alloying novel methods of social, political and cultural analysis with the traditions of labor and business history, these authors take history “from the bottom up” all the way to the top.

The Series launched in 2017 with two books: *From Head Shops to Whole Foods: The Rise and Fall of Activist Entrepreneurs*, by Joshua Clark Davis (see article, page 20) and *Creditworthy: A History of Consumer Surveillance and Financial Identity in America*, by Josh Lauer (see *Financial History*, issue #122).

Forthcoming books in the series include *American Capitalism: New Histories*, edited by Sven Beckert and Christine Desan; “Let Us Have a Bank”: *The St. Luke Bank and Black Women in Finance, 1850s–1930s*, by Shennette Garrett-Scott; and *Empire and the Afterlife of Slavery*, by Justin Leroy. \$

For more information on this series, please visit <https://cup.columbia.edu/hoc>.



UPCOMING EVENTS CALENDAR

- Oct 28** Walking Tour: 30th Annual Great Crashes Tour. 1:00–4:00 p.m. \$15 includes Museum admission.
- Nov 10** Walking Tour: Veterans in Downtown New York. 11:00 a.m. – 12:30 p.m. \$15 includes admission to the Museum and the Lunch and Learn with Sidney Rocke.
- Nov 10** Lunch and Learn Series: Sidney Rocke on “Mutilated Currency: Redeeming Cash and Fighting Scams.” Talk followed by Q&A. 12:30 – 1:30 p.m. \$5 includes Museum admission; members and students free.
- Nov 16** Walking Tour: When New York Was New Amsterdam. 11:00 a.m. – 12:30 p.m. \$15 includes admission to the Museum and the Lunch and Learn with Kenneth Winans.
- Nov 16** Lunch and Learn Series: Kenneth Winans on “What They Don’t Teach at Harvard: History as an Investment Tool.” Talk followed by Q&A and book signing. 12:30 – 1:30 p.m. \$5 includes Museum admission; members and students free.
- Nov 28** Full-Day Conference: “Restoring American Economic Dynamism: New Solutions for America’s Productivity Slowdown.” Co-presented with the CFA Institute Research Foundation and S&P Global Market Intelligence. \$100 general admission; \$40 Museum and CFA Institute members; \$25 students; free for working members of the press. Reservations required.
- Dec 16** Walking Tour: Holidays on the Street. 11:00 a.m. – 12:30 p.m. \$15 includes Museum admission.

*All events are held at the Museum (48 Wall Street, NYC) unless otherwise noted.
For more information or to register online, visit www.moaf.org/events.*

**DEC 27
1928**

Portfolio manager Walter Morgan founds the nation's first “balanced” mutual fund, the Industrial and Power Securities Co., which invests in both stocks and bonds. Later renamed the Wellington Fund, it eventually forms the nucleus of the Vanguard Group of Investment Companies.

MoAF Launches “Making History Series”

By Sarah Poole, Collections Manager

IN OCTOBER, the Museum introduced a “Making History Series,” featuring individual artifacts that represent significant milestones in financial history. The objects featured in this Series will rotate periodically to tell stories of major events, inventions and innovations in finance.

The first objects on display include two items from the Museum’s collection: the April 1966 issue of *Fortune* magazine in which Carol Loomis coined the term “hedge fund” and a 1971 photo of the Nasdaq Data Center.

Carol Loomis is a financial journalist who held the longest tenure of any employee in *Fortune*’s history, starting as a research assistant in 1954 and retiring as senior editor-at-large in 2014. Her landmark article, “The Jones Nobody Keeps Up With,” described the investment practice of sociologist and journalist Alfred Winslow Jones. Jones’s “hedge” concept put him in a position to profit on both rising and falling stocks, as he utilized strategic short positions to protect himself and his investors in case he misjudged the general market trend.

Most investment strategies at the time protected a portion of the capital by maintaining cash reserves or bonds. It is debated who started the first “hedge fund,” whether it be Jones, value investor Benjamin Graham or an ancient Greek philosopher named Thales, but Loomis’ name for this type of fund stuck. Her full article can be viewed here: <http://bit.ly/moafloomis>.



Kristin Aguilera

Carol Loomis views the “Making History Series” case featuring the 1966 issue of *Fortune* with her now-famous “hedge fund” article.

Founded in 1971, National Association of Security Dealers Automated Quotations (NASDAQ) was the world’s first all-electronic stock exchange. The photograph on display in the Museum shows the NASDAQ’s early data center. The revolutionary system has attracted many successful technology companies throughout the exchange’s history, including Apple, Microsoft, Dell, Amazon and Google.

The exchange split from the National Association of Security Dealers (NASD) in 2000-2001, becoming the publicly-traded Nasdaq, Inc. Today, Nasdaq lists more than 3,700 companies worldwide with more



Museum of American Finance

Photograph of the NASDAQ data center, 1971.

than \$10 trillion in total market value.

These objects are joined in the “Making History Series” by a 1995 New York Stock Exchange wireless handheld computer, on loan to the Museum from Michael Einersen and Nicholas Marsala. This computer was used to trade 1,000 shares of IBM on the NYSE on September 25, 1995, marking an end to the use of paper buy and sell orders to trade stocks.

The “Making History Series” cases are located throughout the Museum exhibit galleries and can be identified by the multicolored timelines along the tops of their labels. 💰



JAN 9
1835

The earliest-known suspension of trading in a US stock occurs, as the New York Stock & Exchange Board (precursor to the NYSE) halts activity in the Morris Canal & Banking Co. amid widespread manipulation of its shares.

Guano Finance

By Brian Grinder and Dan Cooper

THE CHINCHA ISLANDS of Peru are not on anyone's list of must-see tourist destinations. These three islands lie a few miles off the coast of Peru 100 miles south of Lima. They are massive chunks of granite that burst out of the Pacific Ocean. There are no beaches, no luxury resorts and no potable water, but there are birds — lots of birds.

Every year guanay cormorants, blue-footed boobies, pelicans and other winged species find their way to these islands to mate, to find sustenance and to defecate. The warm Humboldt Current provides the birds with abundant meals of anchoveta and other small fish. These nutrient-rich fish are then translated into guano rich in nitrate and phosphorous that, thanks again to the dry Humboldt Current, does not leech out over the years but retains its potent potential

“Manure does not rank high in the world's economies. It is refuse. Garbage. We organize efficient and sometimes elaborate systems to collect it, haul it away, get it out of sight and smell. But the observant and wise know that this apparently dead and despised waste is teeming with life — enzymes, numerous microorganisms. It's the stuff of resurrection.”

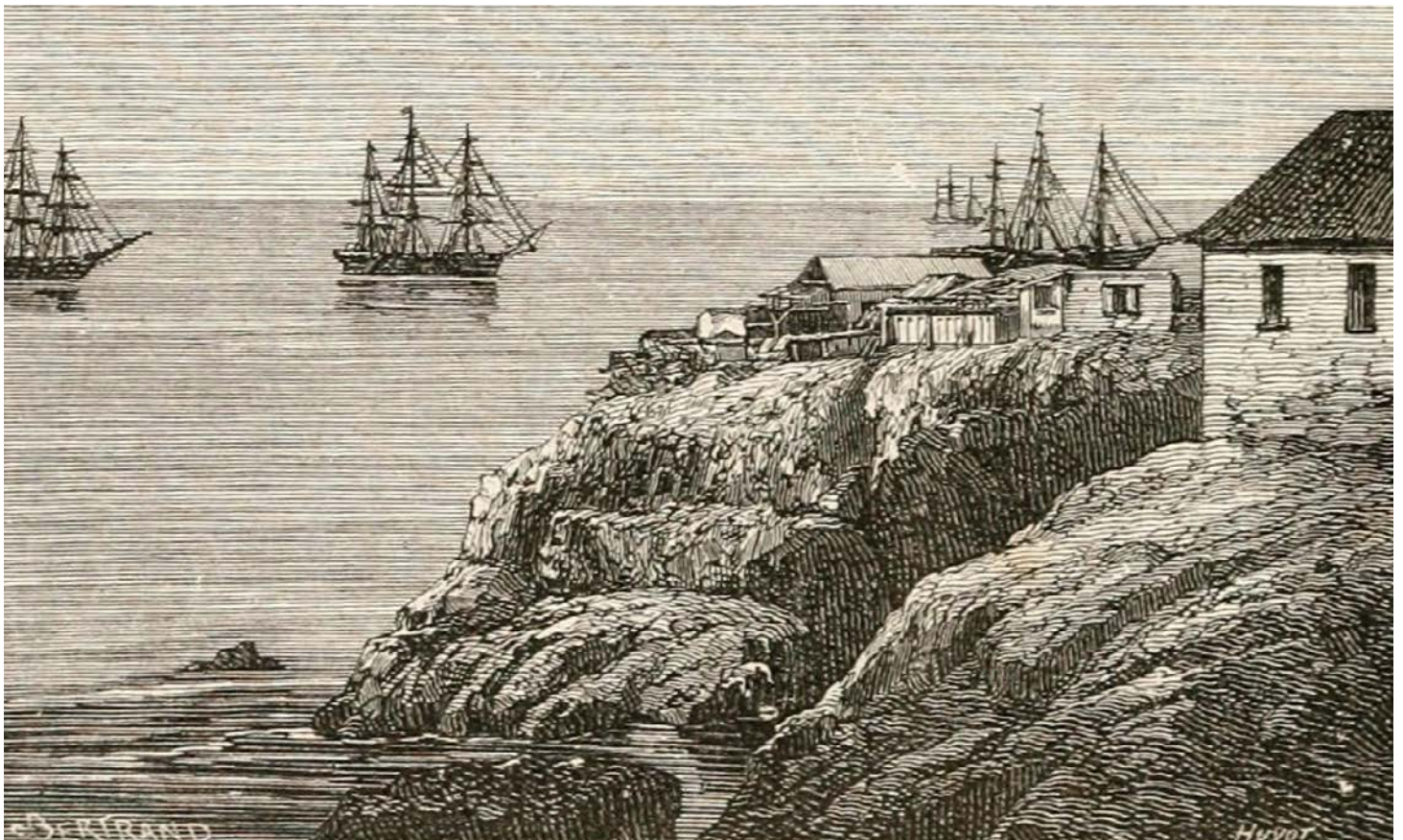
— Eugene H. Peterson

as fertilizer. This prodigious production of guano piled up relatively undisturbed on these islands over thousands of years.

The Incas understood the value of guano. There is evidence that they not only used it as fertilizer for their crops, but that they protected the islands by making them off limits to the public. The

Spanish, initially attracted to Peru by gold and silver, also made some use of guano as fertilizer, but it was not until the 19th century that the agricultural industries of Europe and North America began to take guano seriously as a commercial fertilizer.

Successful agricultural experiments with guano in Europe in the early 19th



1866 sketch of the Chincha Islands of Peru.

century led to a huge increase in demand for the product. Guano, especially Peruvian guano, promised to revitalize worn out land in Europe, as well as the United States. Farmers struggling to increase production and feed growing populations without wearing out the soil on their farms clamored for more.

Historian Gregory T. Cushman argues, "Marine bird excrement is at the root of modern existence." Without guano, the amazing economic growth of the 19th and 20th centuries and "the development of global industrial capitalism" could not have happened.

The US Congress passed the Guano Islands Act of 1856 because of the strategic importance of guano to American agriculture. The Act allowed any US citizen to lay claim to any guano island not under the jurisdiction of another government and authorized the President "to employ the land and naval forces of the United States to protect the rights of said discoverer or discoverers or assigns, as aforesaid." Scores of Pacific islands became possessions of the United States under this Act.

When the Peruvian government realized the potential value of guano exports, it laid claim to all of the guano in Peru and began to grant monopolies to foreign companies for the export of guano to certain areas of the world. The House of Gibbs, for instance, entered into a contract with the Peruvian government that gave the firm a monopoly to export guano to Great Britain and the United States.

This contract enriched the company's coffers over the 20 years it was in force. However, it embarrassed the company to benefit so substantially from the export of bird poop. European merchant bankers generally considered themselves to be above the sniff of common dung, and the House of Gibbs went to great lengths to distance themselves from the inescapable fact that they had grown rich, as one wag put it, "by selling turds of foreign birds."

A young Irishman by the name of William Russell Grace had no qualms about making money in the guano trade. At 14, Grace ran off to sea. His seafaring adventures led him to New York City, a city that would later elect him as its first Roman



Late 19th century advertisement for guano as a fertilizer.

Catholic mayor. When he finally returned to Ireland and made amends with his peeved father, James, it looked like Grace was ready to settle down to the unspectacular life of a counting house clerk in Liverpool. However, the potato famine brought new opportunities to this restless young man.

James Grace owned a small estate in Ireland when the potato famine hit. He struggled to keep his workers employed, but he eventually gave up and found a job as a tax collector in Dublin. Nevertheless, James remained concerned about the plight of the landless poor who were starving to death. In 1851, James organized

a colonizing effort to Peru where participants would work on the sugar plantation of his friend and fellow Irishman, Dr. John Gallagher. William, who was now working as a passage broker for emigrants, no doubt helped organize the endeavor. He also went along to Peru with his father and the 180 colonists as a supervisor.

The difficult voyage to Peru took 101 days to complete, and when the exhausted migrants arrived in Peru, malaria and dysentery ravaged them. Most never made it to the plantation but chose to book passage to more amenable places, such as Australia or California. James returned home after three years in Peru, but William stayed behind to become a partner of John Bryce and Company, a ship outfitter headquartered in the port city of Callao near Lima. Most of the firm's customers engaged in guano transport, as the Age of Guano was in full flower.

Since Callao was over 100 miles from the Chinchas, Grace proposed that they stock an old ship hulk, send it to the Chinchas, and open a floating store that catered to the ships waiting to be loaded with guano. The inefficient process of taking on guano could take weeks or months, and the scores of waiting ships made a ready market of bored sailors, soldiers and government officials who welcomed the nearby supply of foodstuffs and marine provisions. Grace's great idea laid the foundations for what would eventually become the "powerful multinational corporation W.R. Grace & Co."

Many of the ships waiting at the Chinchas Islands were American; Grace, who operated the Chinchas store for about six years, developed good relations with several American captains and their crews. He first met his wife, Lillius, on her father's ship, the *Rochambeau*, as it waited for its malodorous load. William and Lillius were married three years later in Maine but returned to Peru and the Chinchas store, where they began a family. In 1862, Grace moved back to Callao to take charge of the overall business after John Bryce retired to England.

Grace was diagnosed with Bright's disease shortly after the move. His doctor advised him to leave Peru and live out

his remaining few years in a more restful environment.¹ Upon receiving this grim prognosis, Grace set sail with his family for farewell visits to Ireland and the United States. They returned to Peru in 1863 and Grace, who fully recovered in Ireland, resumed work. His health, however, made a turn for the worse necessitating a return to Ireland, where he again made a full recovery.

In 1866, Grace moved to New York and remained there for the rest of his life at the helm of W.R. Grace & Co. His younger brother, Michael, took charge in Peru and expanded into mining and railroad operations. His leadership transformed *Casa Grace* into the face of the United States in most of South America.

William Grace ran successfully for mayor of New York in 1880 and served one term. He won largely because of his willingness during the US Civil War to extend credit to Union ships stranded in Peru after English and Peruvian businesses refused to aid them. He died of pneumonia in 1904, decades after his diagnosis of Bright's disease.

While Peruvian guano enriched the House of Gibbs and Casa Grace, it did little for the average Peruvian. The Peruvian government relied primarily on guano exports to fund the government, and it borrowed heavily based on projected guano revenues. Corruption was inevitable, and much of the revenues from the guano trade enriched the friends and relatives of well-placed government officials. However, guano exports helped finance the nation's sugar industry and allowed the government to finance and build the country's railroad system.

The Peruvian Age of Guano began in the 1840s and ended in the 1870s. The end came about because the supply of guano was nearing exhaustion and because of the development of synthetic fertilizers. Guano is making somewhat of a comeback today, as consumers have become more concerned with how foods are grown. Sustainability and an emphasis on organic foods have increased demand for guano as a fertilizer.

Today, guano is harvested in much the same way as it was in the 19th century,

with the exception that the workers are no longer prisoners or forced-labor victims.² The pay is relatively good, and the seasonal workers are free to leave the islands.

Although largely forgotten today, guano played a significant role in global economic development during the 19th century. This humble commodity allowed farmers to feed rapidly-growing populations and became the financial backbone of the Peruvian economy. \$

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Notes

1. There was no known cure for Bright's disease at the time. The disease took the lives of such notables as poet Emily Dickinson in 1886, Alice Roosevelt (Theodore Roosevelt's first wife) in 1884, Ellen Wilson (Woodrow Wilson's first wife) in 1914 and Chester A. Arthur in 1886.
2. A video of the modern guano harvest is available on YouTube here: <https://youtu.be/HOq8PKX18A4>

Where Are They Now?

The Syndicate of the Ford Motor Company Initial Public Offering of 1956

By Susie J. Pak

IN THE MID-20TH CENTURY, there were hundreds of investment banks and brokerages houses across the United States. Starting in the 1960s, these firms began to disappear. This change has not gone unnoticed, particularly by members of the financial community, who experienced this change in their own lifetimes. In 2012, when *Barron's* published an article titled "Where Have You Gone, Blyth Eastman Dillon Paine Webber Kidder Peabody?," its sentiments echoed those of many, who felt as though they had lived through a "Darwinian evolution" of sorts.

Barron's point of reference for this change was the fate of the syndicate that underwrote the Ford Motor Company's historic initial public offering (IPO) in 1956—a group of 205 top banks from the United States and Canada led by Goldman Sachs, whose senior partner, Sidney J. Weinberg, was the driving force behind the Ford deal. As the largest common stock IPO in American history until that time, the Ford IPO established Goldman Sachs's reputation as a leading investment bank. In her biography of the firm, Lisa Endlich writes that Goldman partner John Whitehead, who assisted Weinberg on the deal, proudly displayed the Ford tombstone in his office, framed but without glass. Over time, Whitehead also noticed the change in his community. As the ranks thinned, Endlich writes, he crossed names off the list with a red pen.

Tombstone advertisement for the Ford Motor Company IPO, which was originally printed in *The Wall Street Journal* on January 18, 1956.

THE WALL STREET JOURNAL, WEDNESDAY, JANUARY 18, 1956

This is not an offering of these Shares for sale, or an offer to buy, or a solicitation of an offer to buy, any of such Shares. The offering is made only by the Prospectus.

10,200,000 Shares

Ford Motor Company

Common Stock
(\$5 Par Value)

Price \$64.50 per share

Copies of the Prospectus may be obtained only from such of the undersigned as are registered or licensed dealers or brokers in securities in this State.

Blyth & Co., Inc.	The First Boston Corporation	Goldman, Sachs & Co.	Kuhn, Loeb & Co.	Lehman Brothers	Merrill Lynch, Pierce, Fenner & Beane	White, Wald & Co.
Eastman, Dillon & Co.	Glenn, Ferguson & Co.	Harrison Ripley & Co.	Kidder, Peabody & Co.	Lazard Frères & Co.	Smith, Barney & Co.	Stone & Webster Securities Corporation
Union Securities Corporation	Dean Witter & Co.	American Securities Corporation	Beat, Stearns & Co.	Drexel & Co.	Hempill, Noyes & Co.	Hornblower & Weeks
Carl M. Loeb, Rhoads & Co.	F. S. Maudslay & Co.	Paine, Webber, Jackson & Curtis	Wetherill & Co.	Allen & Company	Clark, Dodge & Co.	Dominick & Dominick
Hallgarten & Co.	W. E. Hutton & Co.	Reynolds & Co.	A. C. Alfano and Company	Bache & Co.	A. G. Becker & Co.	Central Republic Company
Francis I. duPont & Co.	E. F. Hutton & Company	W. C. Langley & Co.	Alas, Bowers & Sons	F. Eberstadt & Co.	Equitable Securities Corporation	First of Michigan Corporation
Hayden, Stone & Co.	Lee Higginson Corporation	R. W. Priesapich & Co.	L. F. Rothschild & Co.	Salomon Bros. & Hutzler	Shields & Company	Spencer Trask & Co.
Tucker, Anthony & Co.	G. H. Walker & Co.	Walston & Co., Inc.	Wood, Struthers & Co.	Baker, Weeks & Co.	Blair & Co.	Dick & Merle-Smith
Laurence M. Marks & Co.	Model, Rolan & Stone	F. S. Smithers & Co.	Coffin & Burr	R. S. Dickson & Company	Goodbody & Co.	Granberry, Marache & Co.
Schoellkopf, Hutton & Pomeroy, Inc.	Schwabacher & Co.	Shearson, Hammett & Co.	A. E. Ames & Co.	The Dominion Securities Corporation	First California Company	McLeod, Young, Weir
River & Co.	Shuman, Agnew & Co.	William R. Staats & Co.	Swiss American Corporation	Van Alstyne, Noel & Co.	Wood, Gandy & Co., Inc.	Abbott, Procter & Palmer
Robert W. Baird & Co.	J. Barth & Co.	Bateman, Eichler & Co.	William Blair & Company	Boothner and Company	Bowen, Sullivan & Company, Inc.	J. C. Bradford & Co.
Courts & Co.	Crowell, Woodson & Co.	Elworthy & Co.	A. M. Kidder & Co.	Laird, Russell & Meeds	Laird & Company	Lester, Ryms & Co.
Irving Landisberg & Co.	Manley, Bennett & Company	McDonald & Company	The Milwaukee Company	Mitchum, Jones & Templeton	Newhard, Cook & Co.	The Ohio Company
Piper, Jaffrey & Haywood	Reinhardt & Gardner	The Robinson-Humphrey Company, Inc.	Wm. C. Roney & Co.	Stroud & Company	Sutro & Co.	Auchincloss, Parker & Rudolph
Bacon, Whipple & Co.	Baker, Simonds & Co.	Ball, Burge & Kraus	Blunt Ellis & Simmons	Brush, Maccomb & Co. Inc.	Richard J. Buck & Co.	Burnham and Company
J. M. Dain & Company	Davis, Shaggs & Co.	Dempsey-Tegeler & Co.	Emanuel, Dretjen & Co.	Farwell, Chapman & Co.	First Southwest Company	Fulger, Niles-W. B. Hibbs & Co., Inc.
Fulton, Reid & Co.	Ira Haupt & Co.	Hayden, Miller & Co.	H. Heutz & Co.	J. J. B. Hilliard & Son	Hirsch & Co.	J. A. Hogle & Co.
Hooker & Fay	The Illinois Company	Johnston, Lemos & Co.	Kulman & Company, Inc.	McCormick & Co.	Merrill, Turben & Co., Inc.	Putnam & Co.
Rauscher, Pierce & Co., Inc.	Scott & Stringfellow	L. M. Simon & Co.	Singer, Deane & Scribner	Stein Bros. & Boyce	Stern Brothers & Co.	Waggoner & Dupert, Inc.
Adams & Peck	Almstadt Brothers	Baker, Watts & Co.	George D. B. Bright & Co.	Butcher & Sherwood	H. M. Blythe & Company	Campbell, McCarthy & Company
Carolina Securities Corporation	Childress and Company	E. W. Clark & Co.	Julien Collins & Company	Conley & Company	Centerton & Co.	R. L. Day & Co.
Dewar, Robertson & Pannocost	Dittmar & Company	Dualittle & Co.	A. G. Edwards & Sons	Fahy, Clark & Co.	Fairman, Harris & Company, Inc.	Ferris & Company
Forster & Marshall	Gerdley, Susante & Co.	Gregory & Susan	Harward, Wall, Labovine, Friedlander and Company	Johnson, Lane, Spore & Co., Inc.	Edward D. Jones & Co.	Joan, Kreger & Hewitt
Key, Richards & Company	Kenower, MacArthur & Co.	John C. Legg & Company	S. R. Livingston, Cruise & Co.	Loew & Co.	Masson Brothers	Masson-Moore & Co.
Nashit, Thomson and Company, Inc.	Perconti, Shepard & Co., Inc.	W. H. Newbold & Co.	Newberger & Co.	Public Northwest Company	Peters, Writer & Christensen, Inc.	Philip, Fenn & Co.
Steen, Frank, Meyer & Fox	Sidel, Nicholas & Company	Ratan, Meale & Co.	M. A. Schapiro & Co., Inc.	Chas. W. Seratoni & Co.	Silberberg & Co.	Smith, Moore & Co.
Storn Brothers & Co.	Waggoner & Dupert, Inc.	Richard W. Clarke Corporation	Shelby Collins Davis & Co.	Dreyfus & Co.	Fahnestock & Co.	Gross, Ellis & Anderson
Halle & Sieglitz	Harris & Partners Limited Inc.	Henry Hermann & Co.	Jagally & Snyder	Kann, Taylor & Co.	Mills, Spence & Co. Inc.	Parish & Co.
Carl H. Pierheimer & Co.	C. B. Richard & Co.	Stern, Lauer & Co.	Stetson Securities Corporation	Sutro Bros. & Co.	Arthur Wiesenberger & Co.	J. R. Williams & Co.
Zuckerman, Smith & Co.	Adams Securities Corporation	Amott, Baker & Co.	Barrow Lunds & Co.	Bell, Gouinlock & Company	W. E. Burnett & Co.	Coggeshall & Hicks
Craigheyle, Finney & Co.	Titale & King, Lhaier, Stout & Co.	S. D. Fuller & Co.	Greenbriar & Co. (N.Y.) Inc.	Hertelmann & Co.	Josephthal & Co.	Mance & Schley
New York Hanoatic Corporation	Pres, Kandell & Hollister	Seward & Hart	Steiner, Rouse & Co.	Talmage & Co.	H. N. Whitney, Goodby & Co.	Winstler, Douglas & McEvoy
Brenn, Nordenman & Co.	Ryd Brothers	P. F. Fox & Co.	Gougar & Company	Gilman & Co.	Gross & Co.	G. C. Hans & Co.
Hersfield & Stern	Kornstadt & Co., Inc.	Rand & Co.	A. L. Stamm & Co.	C. E. Unterberg, Towbin Co.	Abraham & Co.	Hecht & Co.
Wm. E. Palfuck & Co., Inc.	Eate & Co.	Giddens, Morris & Co.	Hannab, Ballin & Lee	Hardy & Co.	J. B. Timmins & Co.	T. L. Watson & Co.
Edward A. Purcell & Co.	L. L. Ross & Co.	Rosenfeld & Co.	Rutter & Co.	J. B. Timmins & Co.	T. L. Watson & Co.	

January 18, 1956

In 2016, the Museum of American Finance began a research project to investigate what happened to the firms of this historic syndicate. Starting with the 205 firms listed on the Ford Motor Company IPO tombstone, the project reconstructs a genealogy of each bank focusing on its origin and demise. Given that the majority of the syndicate participants were private partnerships, consistent comparative financial data is difficult to obtain, but other characteristics of the community can be analyzed from existing sources.

For instance, the project studies the social origins of the founders, when the family of the founders ceased to be members of the firm, when the firm became a corporation and/or went public, as well as when and why it disappeared. Aggregated, the individual narratives form an empirical dataset from which one can analyze certain overarching patterns regarding the consolidation and change in the American banking community in the 20th century.

In forthcoming issues of *Financial History*, we will present the genealogies of specific firms and the larger findings, but first, we revisit the history of the IPO itself. How did it come about and why did it happen when it did? Who were the main actors involved in the deal, and how did they come together? Why, for example, was San Francisco bank Blyth & Co. the manager of the syndicate, even though Goldman Sachs was the dealmaker? These are the questions to which we now turn.

The Ford Motor Company Initial Public Offering (1956)

In 1932, during the Great Depression, Congress passed the Revenue Act, which dramatically increased tax rates. Estate tax rates rose to 45% and exempt amounts were also reduced. In 1934, through an amendment proposed by Senator Robert La Follette (WI), Congress increased the estate tax again. For net estates more than \$10 million, the tax levy became 60%. Lest wealthy individuals try to evade the tax, Congress also assessed high taxes on gifts. By 1935, the exemption for estate tax was cut again, and the top rate increased to 70%.

Knowing that their deaths would lead to substantial taxes, Henry Ford (1863–1947) and his only son, Edsel (1893–1943), created the Ford Foundation in 1936, endowing it with almost 90% of the Ford Motor Company's stock, or 3,089,908 shares of non-voting "A" stock. Voting rights resided "solely in 172,645 outstanding shares of "B" stock, all of which [were] owned by members of the Ford family and their interests."

Though the Ford Foundation was technically a philanthropic endeavor, the Fords also used it to safeguard family control of the Ford Motor Company. According to Dwight Macdonald, author of *Ford Foundation: The Men and the Millions*, "If Edsel and Henry Ford had left their Ford stock to Edsel's children instead of to the Ford Foundation, their heirs would have had to sell most of the shares they had inherited in order to pay the inheritance tax." Until the Revenue Act of 1950, the profits that went to the foundation were also tax-free.

When Edsel Ford died of stomach cancer in 1943 at the age of 49, his oldest son, Henry Ford II (1917–1987), inherited his position on the board of trustees of the Foundation. After a brief struggle over the leadership of the Ford Motor Company, Henry II also assumed presidency of the company in 1945. Two years later, Henry Ford passed away, and his remaining shares of Ford Motor Company stock were allocated to his family (voting) and to the Ford Foundation (non-voting). By that time, the Foundation's endowment was substantial, but its income was limited to the dividends from the Ford Motor Company's stock.

The Foundation was also never entirely sure if the dividends would deviate from expectations, which affected their ability to make grant promises and plan program activities. Wanting to access the principal of its capital, the Foundation decided to sell one-third of its company stock in 1954.

At that time, Ford Foundation's president was H. Rowan Gaither, Jr. (1909–1961). Born in Mississippi, Gaither grew up in Portland and San Francisco, where his father had been a bank examiner and a founder of a small regional bank called

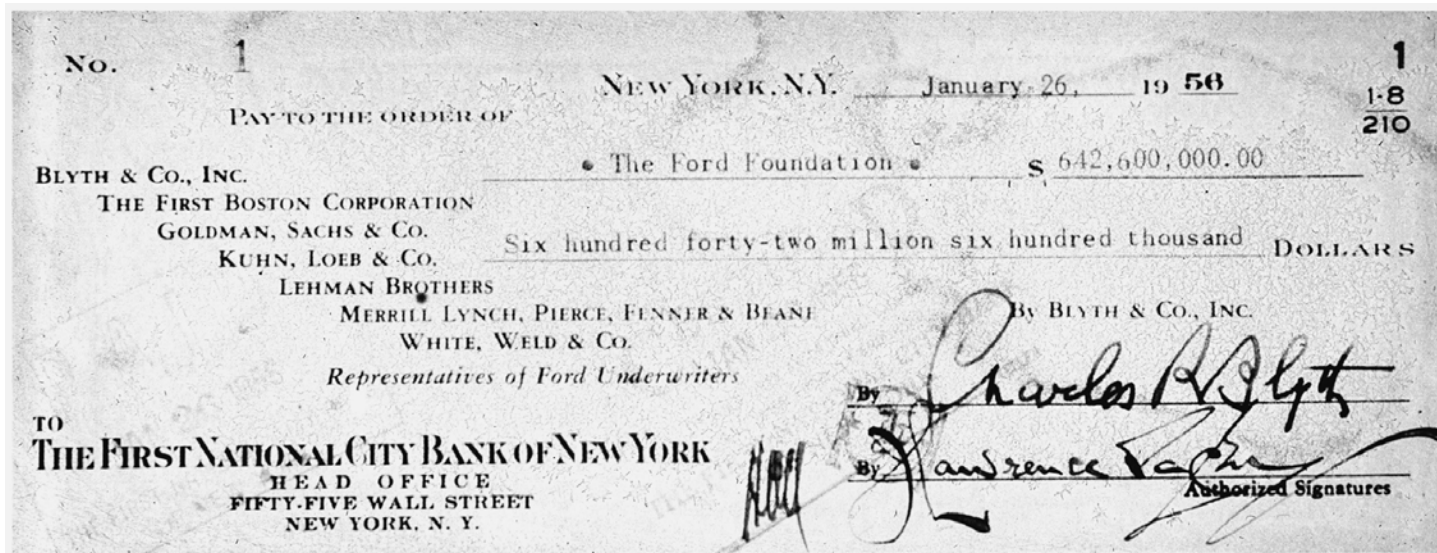
the Pacific National Bank. He attended the University of California as an undergraduate and law student. After practicing law in San Francisco, he worked for the Massachusetts Institute of Technology's Radiation Laboratory (1942–1945).

In 1948, Gaither became chairman of the Rand Corporation, a private organization created during World War II to further the research and development of military planning. While at Rand, he was introduced to Henry Ford II by Karl Compton, president of MIT, who was a trustee of the Ford Foundation. In 1948, Ford II asked him to lead an investigation on what the Foundation should do with its inheritance. In 1953, Ford II tapped Gaither to become president of the Ford Foundation, and by 1954, the Foundation began to investigate the possibilities of a stock sale.

A major issue with the sale had to do with voting rights. Gaither and the foundation felt that the stock could not be sold without voting rights, and so did the New York Stock Exchange. Without exclusivity, however, the family risked losing control over the company, so a compromise had to be made. In 1954, the finance committee of the foundation's board of trustees met almost 20 times to study how to sell the stock and determine how much the family would be compensated for giving up its exclusive rights.

At the time, the members of the finance committee included Gaither; James F. Brownlee, a partner in J.H. Whitney & Co. (a private bank founded by Whitney heir, Jock H. Whitney); John J. McCloy, former Assistant Secretary of War and chairman of Chase Manhattan Bank; and Charles Edward Wilson, former chairman of General Electric (GE) and chairman of W.R. Grace & Co. — a multi-national shipping and industrial manufacturer — who acted as chairman of the committee.

The son of a Protestant-Irish bookbinder, Charles Edward Wilson (1886–1972) was born in New York City and raised by his widowed mother. At the age of 12, he began working as an office boy at the Sprague Electrical Works, which became a subsidiary of GE in 1903. He became president of GE in 1939. Wilson's



Check from the Ford Motor Company IPO payable to The Ford Foundation for \$642,600,000, dated January 26, 1956.

relationship with Sidney Weinberg dated back to World War II when he, Weinberg and Brownlee all served on the War Production Board (WPB). Chaired by Donald Nelson, who was then the vice president and chairman of the executive committee of Sears, Roebuck & Co., the WPB (1942–45) was created by President Franklin D. Roosevelt to coordinate war production activities across government agencies.

Weinberg, Goldman Sachs's senior partner who had campaigned for FDR in 1932 and 1936, was appointed to the WPB in 1942. His job was to find members of private industry for the board. Born in the Red Hook neighborhood of Brooklyn, New York, Weinberg was the son of a wholesale liquor dealer. One of 11 children, he had limited formal education and started working at a young age. In 1907 he got a job with Goldman Sachs, where partner Paul Sachs became a mentor to him and encouraged him to study, even paying for Weinberg to take classes at New York University. After serving in World War I, Weinberg returned to the firm and worked in the Bond Department. He made partner in 1927 and senior partner in 1930.

Weinberg was well-known for his ability to build relationships. President Roosevelt, whom Weinberg had known since Roosevelt was Governor of New York, dubbed him "The Politician." According to William D. Cohan, author of *Money and Power: How Goldman Sachs Came to Rule the World*, General Electric's Charles Wilson joined the WPB after Weinberg

put the "heat" on him from behind the scenes to leave GE and move to Washington. Weinberg and Wilson became close friends, and their association continued well after World War II.

In 1945, Weinberg joined the board of directors of General Electric, no small feat given that GE was a long-time client of the Morgan banks [J.P. Morgan & Co. (f. 1895) and later Morgan Stanley & Co. (f. 1935)]. During the Korean War, when President Harry Truman appointed Wilson to head up the Office of Defense Mobilization, Weinberg served as Wilson's chief assistant.

Charles Wilson was not the only contact with the Ford Foundation and family that Weinberg made during his wartime service. The WPB also had an Automotive Branch, which was headed by Ernest Kanzler (1892–1967), Henry Ford II's uncle and adviser, who had been the production director of the Ford Motor Company. Kanzler was married to Henry Ford II's mother's sister. He became director general of the WPB in 1943. During the war, the WPB coordinated with the Automotive Council for War Production (ACWP, 1940–1945), a volunteer industry group that organized war production for the automobile industry. Its original board included Henry Ford II's father, Edsel. After Edsel died in 1943, Henry Ford II joined the board of the Automotive Council in May 1944, succeeding Charles Sorenson, vice president of the Ford Motor Company, who had taken Edsel's place.

Henry Ford II does not appear to have

ever been a member of the WPB, as many sources suggest. Between 1941 and 1943, he was serving in the US Navy, and he left only when his father died, apparently with some strings being pulled by his uncle. According to William Cohan, as well as Judith Ramsey Ehrlich and Barry J. Rehfeld, co-authors of *The New Crowd: The Changing of the Jewish Guard on Wall Street*, Ford II and Weinberg met in January 1947 when Ford II "became a member of the Business Advisory Council (BAC) of the US Department of Commerce." Weinberg had helped to create the BAC in 1933 after, he said, "President Roosevelt complained he had no contact with business." (It met several times a year with the Commerce Secretary). Like Wilson, Ford II became close friends with Weinberg, and by the time the Ford Foundation and family were negotiating over the stock sale, Ford II tapped him to act as the family's adviser.

Even though Weinberg's friend was acting as the primary negotiator for the Foundation's board of trustees, and even though he had long-standing relationships with the primary players on both sides, the deal was not an easy one. Weinberg submitted more than 50 reorganization plans before finding an acceptable solution to both parties. The final agreement between the family and the foundation determined "the family [would] give up their exclusive right to vote in the affairs of management, and [would] transfer 60% of the voting rights to a new Common Stock." The deal created three types of



Cover of the January 30, 1956 edition of *Life* magazine featuring an article on the Ford Motor Company IPO.

stock and “a reclassification of the stock” of the company.

In return, E.J. Kahn Jr. observed, “The Ford family increased its equity in the company by 1.74% — which, reckoned in terms of the stock’s value on the day it was marketed, amounted to a paper gain of nearly \$60 million.”

Before the Ford Foundation announced the stock sale on November 9, 1955, the underwriting community had been in suspense for more than a year, wondering which firms would be chosen to be the syndicate managers. In addition to

Goldman Sachs, the top firms were: Blyth & Co.; First Boston Corporation; Kuhn, Loeb & Co.; Lehman Brothers; Merrill Lynch, Pierce, Fenner & Beane; and White, Weld & Co.

The Wall Street Journal commented that “a notable absentee is Morgan Stanley & Co., a house noted for its long-standing financing connection with General Motors Corp., Ford’s principal competitor.” The seven co-managers led an underwriting syndicate of 722 firms (205 on the tombstone) at \$63 per share. Utilizing a network of 1,500 securities dealers,

the largest to date, more than 10 million shares were offered to the public at \$64.50 per share. In the end, the Ford Motor Company gained about 300,000 owners, and the foundation realized more than \$640 million from the sale.

Like the Sears, Roebuck & Co. IPO almost 50 years earlier, which Goldman Sachs also underwrote, the Ford IPO was a major boon for philanthropy in education. The Foundation used its funds to give away approximately \$500 million to colleges and universities, hospitals and medical schools. As for Goldman Sachs, the Ford IPO was also reminiscent of the Sears IPO in that it brought the firm an enhanced reputation and new prominence as an underwriter.

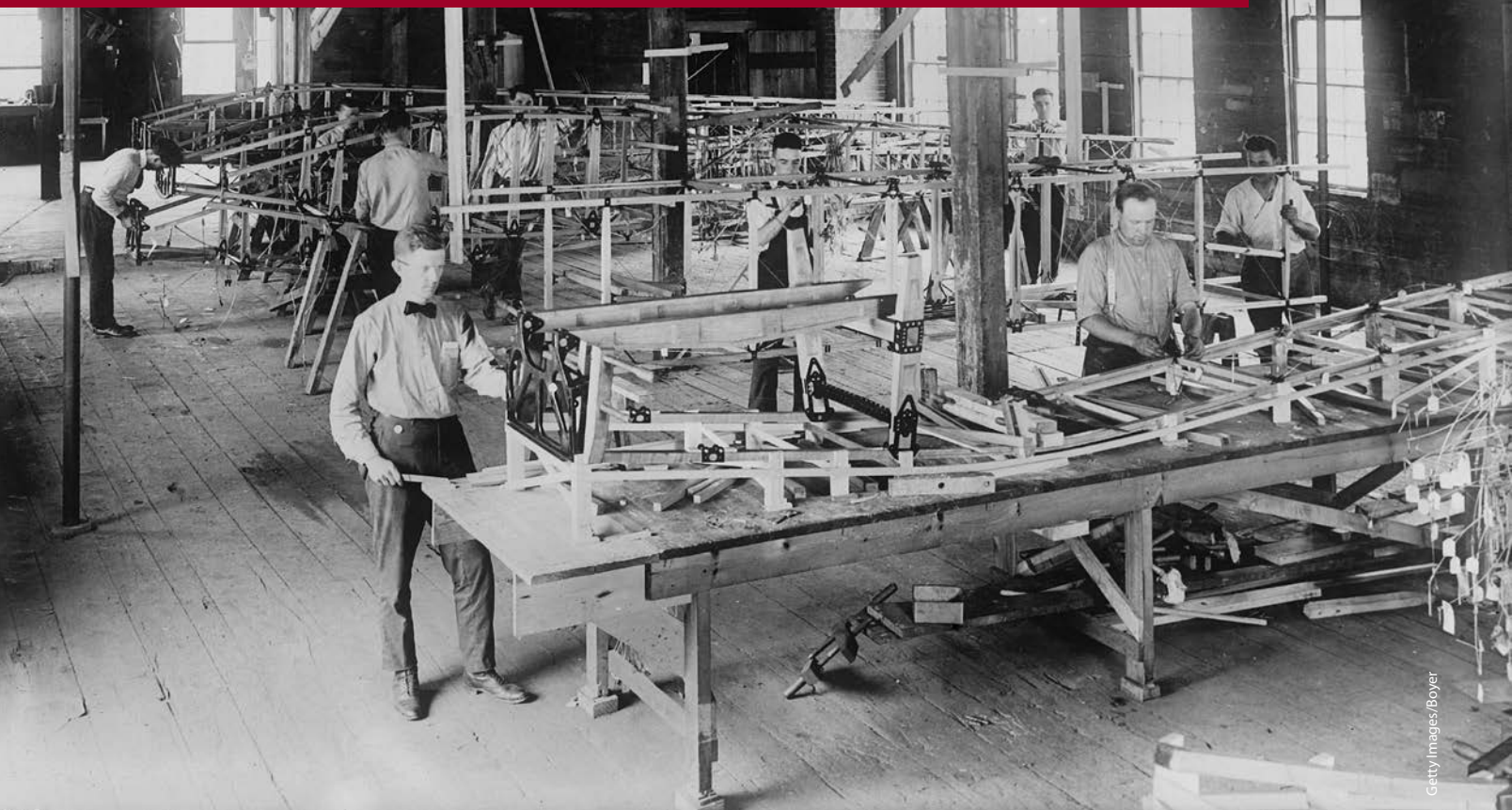
Blyth & Co., which had originated as a western regional house, was given the nominal honor as chairman of the managing committee, most likely because it was, according to *The Wall Street Journal*, “as well known on the West Coast as in the East,” and the Foundation wanted “to achieve the widest possible distribution of the shares to the public.”

But from start to finish, Weinberg was generally acknowledged as having played the major role in organizing the Ford deal, cementing his place in financial history, where he came to be known as “Mr. Wall Street.” In August 1956, he joined the board of the Ford Motor Company, where he remained a director until his death in 1969. \$

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Read the full version of this article with footnotes here.

MOBILIZING US INDUSTRY FOR THE GREAT WAR



Getty Images/Boyer

By Michael A. Martorelli

AMERICA'S FORMAL PARTICIPATION in the Great War that began enveloping Europe in August 1914 did not begin until April 1917, when Congress voted to declare war on Germany. However, in January 1915 many domestic banking firms and manufacturers started to provide financing and equipment for the Allied armies of Great Britain, France and Russia.

During the periods of American neutrality and the country's active military involvement, mobilizing for war presented unprecedented challenges. The recently industrialized economy had to produce new equipment such as tanks, airplanes and machine guns, as well as raw materials such as coal, steel and linen. Neither government leaders nor the nation's business executives fully understood the difficulties inherent in providing those resources. Both entities had to learn new practices

and create new agencies for coping with the unprecedented demands of manpower and material.

Mobilization did not go smoothly. But it did proceed, as the United States finally produced previously unheard-of quantities of equipment and helped sustain the Allied armies as they achieved the ultimate victory over the Central Powers.

The Government Was Officially Neutral, But...

The shooting in Europe started in early August 1914. Shortly afterwards, President Woodrow Wilson issued a proclamation of American neutrality. At the time, few American officials were considering the potential involvement of United States military forces in the hostilities. However, Wilson and his advisors were soon forced to begin considering the potential economic role of America in the European conflict.

Both Great Britain and France were sounding out the global banking power J.P. Morgan and Company about loans to purchase war materials. Secretary of State William Jennings Bryan denounced the idea and reiterated the government's intent to remain neutral. In September, other advisors persuaded President Wilson to adopt policies supporting a recovery from the industrial recession that had begun in July. One of those involved allowing the Morgan bank and other institutions to provide the Allied powers with credits and loans to facilitate the purchase of munitions and other war supplies.

In October, Great Britain and Russia both began to deal with Remington Arms Company and Winchester Repeating Arms Company for the one military

"Aeroplane" manufacturer in the United States constructing the body of a plane for use in World War 1, 1917.

product they knew would be in tremendous demand—rifles. Three months later, with President Wilson’s approval, J.P. Morgan became the commercial agents in the United States for “His Majesty’s Government,” i.e. the sole purchasing agent for Great Britain. The following month, France and Russia signed similar agreements, enabling that bank to also provide their governments a streamlined structure for processing loans for purchasing equipment.

The Morgan partners considered running this purchasing operation either through established purchasing agents or through the offices of a large industrial corporation. They decided, however, to establish an in-house export department, and to hire the well-known businessman Edward Stettinius to run the operation. He organized the department’s activities along functional lines and hired experienced executives to manage sections involving heavy artillery, propellants, chemicals, food and livestock, among others.

From January 1915 to April 1917 (when the United States entered the war), the Morgan bank financed approximately \$3 billion worth of purchases for the Allies, working with almost 1,000 prime contractors and thousands of subcontractors. More than 42% of that business was done with 10 firms. The export department’s staff of 175 people placed orders accounting for 21% of all US exports and 84% of all American sales of munitions and war materials.

The manufacturers who received most of those orders were usually the leading factors in their industries. Many prospered like never before, helping the United States economy recover from the recession of mid-1914. But trying to fill unusually large orders also caused problems. The managements of the aforementioned Remington and Winchester companies did not appear to understand the nature of war production orders, especially as they involved special products not normally sought by pre-war commercial customers.

Both companies began soliciting contracts from the British government as early as September 1915. But neither firm made any provisions for altering their civilian workload while trying to satisfy their military contracts. Thus, in order to handle the flow of new business, both were forced to embark on expensive facilities expansion programs. In doing so, both encountered meaningful manufacturing difficulties that caused them to

miss various delivery schedules in 1915 and 1916. The subsequent customer cancellations almost forced both firms into bankruptcy. Only the United States’ entry into the war saved them, since they could sell the unwanted production quantities to the US Army.

On the surface it would appear that the DuPont Company faced similar difficulties. Before the war, the company depended largely on the sale of black powder and dynamite. Demand for specialty military products, such as smokeless powder, TNT and picric acid was quite low; and the company’s production capa-

city of the value of the contract up front, 30% more when the powder was placed in the dry house and the remainder when the powder was ready for shipment. Thus, the customer, not the company, provided much of the capital financing for the new facilities that would be required to produce the material specified in the contract.

DuPont itself risked only the working capital it would need to meet the tight production schedule that called for large deliveries of powder during the subsequent 12 months. Throughout 1915 and 1916, DuPont signed contracts with similar terms with other Allied governments.



Women drilling engine parts in a Detroit aircraft factory, 1917.

Getty Images/PPG

bilities for those materials were very limited. However, as a supplier of gunpowder in the Spanish-American War, DuPont had more experience than most in dealing with a surge in orders for special military products. Its executives knew that such orders would disappear as quickly as they had emerged.

Using that experience, President Pierre DuPont was in a good position to negotiate very favorable terms on the October 1914 order from France for eight million pounds of cannon powder. The contracted price was to be more than twice the price the US government had been paying. Moreover, France was to pay 50%

Preparing for the Country's Active Participation

During the 28 months that J.P. Morgan was facilitating the purchase of war materials by the Allied armies, the citizens and government officials of the United States were engaging in a contentious debate about the advisability of participating in the worsening European conflict. Secretary of State William Jennings Bryan resigned in June 1915 to protest President Wilson’s marginally more aggressive posture regarding preparedness. Secretary of War Lindley M. Garrison resigned in April 1916 to protest the President’s

hesitancy in acting more forcefully to prepare for entering the war. In the midst of the public debate, military officials were quite aware of their forces' poor state of readiness for war. They began to explore the issue in some depth.

- The General Staff spent most of 1915 preparing the *Statement of a Proper Military Policy for the United States* and 30 supplemental documents. One section recommended stockpiling as many essential supplies as possible for the initial use of any troops committed to battle.
- Separately, the Army War College prepared a study titled *Mobilization of Industries and Utilization of the Commercial and Industrial Resources of the Country for War Purposes in Emergency*. That report suggested giving the President broad powers to order civilian manufacturers to produce (at a fair price) any requested materials, and to seize any industries that did not comply with his requests.
- In October 1915, the US Navy established the Naval Consulting Board as the first official agency charged with coordinating at least some parts of government and private industry. During the first nine months of 1916, a subcommittee called the Industrial Preparedness Committee (IPC) supervised the conduct of an extensive inventory of more than 30,000 industrial plants to determine their capacity for producing war materials. The survey's results were not as useful as promised; they did not include any plans for converting production to military uses and did not correlate production capacity with any list of potential product requirements from the Army or Navy.
- In December 1915, a board of senior Army officers suggested to the War Department that the government should purchase the great bulk of its military supplies from the civilian economy, and only operate its own factories to produce such items as small arms, artillery and ammunition. It urged close cooperation between the military and civilian economies, but it made no suggestions as to how to accomplish that goal.

It's difficult to find any tangible actions that followed the production of these reports and surveys. However, it's easy to suggest that the visible activities of the various boards and committees did help



World War I poster issued by the National Industrial Conservation Movement, which shows Uncle Sam firing a cannon labeled "American industry" shooting supplies and munitions to "The Allies" on a distant shore, 1917.

awaken elements of American society to the potential mobilization for war. Perhaps for the first time in the nation's history, these reports helped all parties acknowledge the important role the newly-industrialized civilian economy would have in providing the country's military forces with the materials that would be needed for war.

The National Defense Act of June 1916 moved the United States a bit closer to mobilization by requiring manufacturers to give priority to government orders for military material. It authorized the Secretary of War to conduct an inventory of all facilities capable of producing arms and munitions, and to determine the

advisability of using civilian or government-owned factories for munitions production. The five-person board assigned the latter task recommended using civilian manufacturers. Thus, they ratified the aforementioned *de facto* situation with Remington and Winchester, and paved the way for massive increases in the orders given to them in 1917 and beyond.

Enabling Full-Scale Mobilization

In August 1916, Congress created the Council of National Defense (CND) and its National Defense Advisory Committee (NDAC). These organizations were

supposed to take the lead role in coordinating the needs of the military with the resources of the nation's manufacturers. However, the members of both were not appointed until October. The Council's five *ex-officio* members (cabinet Secretaries) and the Committee's seven presidential appointees (from industry, labor, medicine and academia) did not hold their first meetings until December. And they only began operating in earnest after the United States severed diplomatic relations with Germany in February 1917.

It may be too harsh to criticize government officials for establishing the CND/NDAC as makeshift organizations with no clearly defined lines of authority. As noted earlier, the United States had no experience in mobilizing for what had truly become the first "World War." The CND and NDAC organized themselves into various committees to oversee functions such as transportation, communications, munitions and medicine; and its leaders recruited knowledgeable men to oversee its activities.

Unfortunately, these committees operated very independently; they failed to coordinate their activities with each other or with the Army's similarly-uncoordinated and independent bureaus of Quartermaster, Ordnance and Signal, among others. Even while acknowledging these flaws, it's easy to see that their formation and eventual staffing sent a valuable signal that the federal government was finally ready to take seriously the challenge of mobilizing the economy for war.

After watching the bureaucratic inertia of the CND/NDAC for only five months, in July 1917, President Wilson superseded those groups and their committees with the War Industries Board (WIB). Unfortunately, his Executive Order saddled it with the same type of difficulties as its predecessor organizations. The WIB had no formal authority over the action of any civilian or military party; it did not include representatives from important civilian agencies, such as the US Shipping Board or the Aircraft Production Board; and it operated through a bewildering array of dozens of subcommittees largely headed by businessmen seeking to protect their own interests.

Over time a group of effective leaders enabled the WIB to achieve some



A woman working in an American aircraft factory, 1917.

successes in cajoling various contractors to meet the needs of the Army or Navy. By the winter of 1917–1918, President Wilson, Secretary of War Newton Baker and presidential advisor and NDAC member Bernard Baruch came to realize an important limitation of the Board was its inability to bridge the fundamental differences in organization and operations between civilian and military organizations. Washington needed to maintain the ability to use private business to harness the economy for war. But it also saw the need to adapt the military's procurement system to the one used in the much larger and still very functional private economy.

Beginning in March 1918, newly-appointed WIB Chairman Baruch revised the WIB's organization and altered many of its practices. The Clearance Office figured out how to coordinate various government agencies' supply requirements more effectively, while the Requirements Committee provided a more accurate picture of future demands. The Priorities Division became a source of centralized authority to channel the flow of manufactured goods to meet the demands of war. Importantly, it included representatives from government offices for Food, Fuel and Railroad Administration whose leaders had statutory authority the WIB did not have.

Military officials achieved a new level of effectiveness as they reorganized their procurement systems to match the capabilities of the civilian economy. Thus, by June 1918, mobilizing the economy to produce the materials needed to prosecute the war was finally becoming an efficient and effective task. Plans were in place to expand production to even higher levels in 1919. But the signing of the armistice in November made that final surge unnecessary.

Mobilizing the industrial economy for the Great War required the creation of a new kind of government-business relationship. Civilian and military organizations had to adopt new methods of planning and coordination. The process was not pretty and did not go smoothly. But thanks to the efforts of hundreds of manufacturers, an index of industrial production that stood at 100 in late 1914 rose steadily to about 140 by early 1917, then ranged between that level and about 175 until late 1918. Real GNP increased by more than 25% during that four-year period.

After a slow start, American industry finally geared-up to produce large quantities of many military items. Sources differ on the precise numbers; most suggest quantities of around three million rifles, 200,000 artillery shells, 3,000 airplanes, 1,500 machine guns, 500 artillery pieces, 80 tanks and several hundred thousand pounds of smokeless powder, other explosives and toxic gas.

The memory and knowledge of the years of American neutrality and the shorter period of active military involvement informed and guided both individuals and institutions when they were forced to confront another military conflict some 22 years after the signing of the armistice. But that is a story for another time. \$

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FROM HEAD SHOPS TO WHOLE FOODS

The Rise and Fall of Activist Entrepreneurs

By Joshua Clark Davis

RON AND JAY THELIN found taking LSD for the first time absolutely transformative. LSD, the brothers believed, could “change the consciousness” of the nation and inspire Americans to reject the aggression they thought had driven the country to war with Vietnam. As Jay explained, “We can no longer identify with the kinds of activities that the older generation are engaged in... They have led to a monstrous war in Vietnam, for example. And that’s why it’s all related—the psychedelics and the war, the protesting, the gap in the generations.”

In January 1966, the Thelins opened the Psychedelic Shop in San Francisco’s Haight-Ashbury district with the primary hope that they could “provide materials that would allow you to have a good trip” and safely experiment with acid. The Psychedelic Shop sold pamphlets and books on LSD, as well as religious texts from Asia, brightly-colored posters, beaded necklaces and smoking papers. When California’s legislature voted to outlaw LSD, Ron co-organized the Love Pageant Rally, which drew hundreds of people to protest the move by dropping acid in unison in Golden Gate Park.

Yet the more the Thelins’ shop attracted customers, the less the Thelins seemed to care about making money. After a year in business, they replaced a large portion of merchandise with a meditation room. The store welcomed anyone in the Haight to spend as much time as he or she wanted in the store’s Calm Center without having to make a purchase.

The Psychedelic Shop was not alone in blending business goals with political

objectives. In the summer of 1968, veteran members of the Student Nonviolent Coordinating Committee (SNCC) opened the Drum and Spear Bookstore in Washington, DC, specializing in works by writers of African descent. In addition to its brick-and-mortar store, Drum and Spear ran a brisk mail-order distribution business for other black booksellers and by 1969 even launched its own publishing company, with headquarters in Washington, DC, and Dar Es Salaam, Tanzania. Drum and Spear was commercially ambitious, yet it was operated by a non-profit organization, Afro-American Resources, Inc.

“We don’t define profit in terms of money,” said SNCC activist and store co-founder Charlie Cobb. “The profit is the patronage of the community, which allows the store to self-support.” Most critically, Drum and Spear aimed to provide its customers with “access to the right kind of information about the black movements, people and their history.”

In 1972, Coletta Reid and Casey Czarnik launched Diana Press, a print shop in Baltimore with the primary goal of “freeing women entirely from male printing establishments.” Reid and Czarnik joined forces with several other women active in local lesbian-feminist groups to form a collective to operate the press. Each woman in the multiracial collective earned \$100 for a month’s work and reinvested most of that salary back into the business.

As one staffer recalled, the press “didn’t worry about making money, or our profit margin.” Within a few years, Diana Press had become one of the leading publishers in the women’s movement. “Although we are committed to remaining financially

viable and independent, we are also committed to producing books that speak to the real needs of women—not to male assessed market potential,” the company’s catalog declared.

And in 1978, John Mackey and Renee Lawson—who had met while living at a vegetarian cooperative house—launched a vegetarian and organic food store called SaferWay in Austin, Texas. Mackey described his politics as “social democratic,” and he felt “alienated from society.” He and Lawson bonded by “question[ing] our nation’s values. While the Vietnam War was foremost in many of our minds, human rights, food safety and environmental deterioration were major concerns as well.”

The young couple opened SaferWay, seeking to “make our country and world a better place to live.” Mackey was a member of several cooperative groceries and believed that “business and corporations

were essentially evil because they selfishly sought only profits.” The name “SaferWay,” of course, spoofed the supermarket company Safeway and indicted the social, economic and environmental dangers of corporate chains. Within two years, Mackey merged SaferWay with a competing store to form a new business he and his partners would call Whole Foods Market.

Operating in different areas of the country and selling different products for different reasons, these businesses shared a critical commonality, one that placed them at odds with conventional notions of capitalism: the people who ran these enterprises touted social and political change, not profit, as their primary objectives. These four stores, for all their unique features, represented a much larger movement of thousands of such businesses across the United States.

The “activist entrepreneurs” who operated such businesses emerged from social

movements of the late 1960s and the 1970s believing that American society was sick from inequality, conformity, materialism, hypocritical moralism and alienation. American business not only exhibited the symptoms of these social illnesses, they argued, but also reinforced and often created them. These unconventional business owners sought autonomy and independence from such sicknesses.

With their small, politically-informed and often struggling shops, they offered alternatives to what they saw as the homogenous, discriminatory and spiritually bankrupt consumer culture of chain stores, modern industrial production and multinational corporations. Activists conceived their storefronts as antidotes to the alienation produced by America’s dominant business and consumer culture.

Just as New Left groups such as Students for a Democratic Society (SDS) and SNCC extolled “participatory democracy,”



John Mackey, CEO of Whole Foods, in 2009.



Whole Foods headquarters.

activist entrepreneurs espoused “participatory economics”: the idea that citizens could regain power over their lives by making their daily experiences in capitalist society more humane, authentic and even politically progressive or radical.

Although activist entrepreneurs didn’t call themselves such, the term conveys their particular blend of social movement participation and business ownership. Activist entrepreneurs re-envisioned the products, places and processes of American business. First, they sought to introduce products that promoted progressive and radical politics, as well as cultural pluralism in the marketplace. These businesses grew out of the New Left’s “movement of movements,” which included civil rights, Black Power, feminism, pacifism, environmentalism, the hippie counterculture and other movements.

Second, these entrepreneurs conceived of their storefronts as political places or “free spaces” that incubated a culture of activism and solidarity. Third, many activist enterprises re-conceptualized processes of doing business by promoting shared ownership, limited growth and democratic workplaces.

In turn, they rejected capitalist norms of limited proprietorship, profit maximization,

rational economic behavior and hierarchical management. Activist businesses accorded varying levels of importance to these three factors. Black-owned bookstores and head shops focused primarily on their products, but they also emphasized places and, to a lesser degree, process.

Most natural food stores were concerned with products above all else, but co-op groceries were also deeply engaged with process. Feminist businesses came the closest to placing an equal emphasis on process, products and places.

Their differences notwithstanding, activist entrepreneurs partook in a shared but largely forgotten experiment in the 1960s and 1970s to create small businesses that advanced the goals of political change and social transformation. Although social movements may be best remembered for marches and mass meetings, activists also eagerly harnessed small businesses as a critical tool for disseminating their ideologies and doing organizing work. A consideration of activist enterprises thus forces us to rethink the widespread idea that the work of social movements and political dissent is by definition antithetical to all business and marketplace activity.

These businesses furthermore belie the common but mistaken notion that

political activism and counterculture occupied two separate spheres in the 1960s and 1970s. Indeed, activist businesses were both political and cultural institutions. Some activist entrepreneurs understood social change primarily as political, whereas others understood it primarily as cultural—but these views represented two sides of the same coin. And with their progressive and radical politics, activist businesses provide a sharp contrast to the common narrative of business as an overwhelmingly conservative, profit-making endeavor in post-war America.

The title of this article, and the book it is drawn from, highlights a marked transition away from the collective goals of political progress that some, although not most, activist enterprises made between the late 1970s and the end of the 20th century. The most prominent and powerful retailer to emerge out of the activist business tradition is Whole Foods Market.

Over the course of the 1980s and 1990s, Whole Foods abandoned both its initial enthusiasm for collective political change through socially-minded commerce, as well as its skepticism of unfettered capitalism. Even though the company selectively employs countercultural, spiritual and sustainable business practices, it has

shifted its focus to conventional corporate business goals of double-digit growth, national market share and an optimal share price for its stock, which it has sold publicly since 1992. In 2017, Whole Foods Market was acquired by retail giant Amazon.com Inc. for \$13.7 billion.

The company is renowned for its high prices (decreasing since the Amazon acquisition), conflict-ridden parking lots and founder John Mackey's conservative economic views, in particular his public denunciation of labor unions and the Affordable Care Act, as well as his libertarian claims about the evils of government. At best, Whole Foods offers consumers opportunities to improve their health and reduce their ecological footprint through individual acts of self-reform. It may be the most prominent descendant of activist business in America today, but it is a neo-liberal offspring that its forebears would not recognize as legitimate.

In the 21st century, activist entrepreneurs' most enduring legacy is the


language of liberation and social change they passed on to countless businesses, many of which have little enthusiasm for the work of social movements. Examples of this influence include tech companies in Silicon Valley that seek to flatten their organizations and encourage their employees to embrace mindful meditation; self-described social enterprises and "mission-driven" businesses; artisanal and boutique retailers that promote "buying local" and celebrate their independence from chain stores and mass production; and even big-box retailers that now gladly sell products they once scorned, including black-authored books and organic foods.

Despite their widespread influence, activist businesses of the 1960s and 1970s are rarely remembered for the impact they have had on contemporary companies that celebrate ethical business and community engagement. Meanwhile, a new generation of committed leftist businesses calling themselves the "solidarity economy" or "new economy" has emerged to

continue the work begun by earlier activist entrepreneurs. Although this revival has slowed the decline of activist storefronts in the past several decades, it has not stopped that decline.

Solidarity businesses are fewer in number and less visible than their predecessors were in the 1960s and 1970s. Corporate co-optation of some of activist businesses' most popular features has made their offerings less distinctive and less appealing to customers than they once were. Ironically, the appropriation of activist enterprises' ideas by the business mainstream has made it more difficult for the new generation of activist businesses to thrive. \$


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Colonel James Swan

Forgotten Financier



By Damien Cregeau

JAMES SWAN played an important role as a financier of the American Revolution, though he is largely forgotten today. While not as famous as financier Robert Morris, Swan led a colorful life as an Army colonel, merchant, real estate magnate, investor and international liaison. His marriage to socialite Hepzibah Clarke in 1776 only enhanced his social standing and investing opportunities in both the United States and France.

Swan's life might be oversimplified as rags to riches—and rags to riches again. He immigrated to Boston from Fife, Scotland in 1765. His first known employment was at Thaxter and Son, an accounting and book-binding company, where he became friends with Benjamin Thompson, later knighted Count Rumford (by the King of Bavaria), and Henry Knox, who became famous as a major general in the US Continental Army.

At the age of 18, Swan wrote a well-read pamphlet challenging the African slave trade in Great Britain and its colonies, entitled, "A Dissuasion to Great Britain and the Colonies from the Slave Trade to Africa." He argued against slavery on moral, religious and business grounds. Publishing such a pamphlet was quite intrepid, as several notable Boston families were involved in such trade.

Swan took great interest in the rising discontent with the various British acts intended to raise revenue to repay debts incurred to defeat the French in the Seven Year's War (known in North America as the French and Indian War). The young Swan got swept up in the patriotic fervor, joining the Sons of Liberty and participating in the Boston Tea Party.

Years later, after the Revolutionary War had erupted in 1775, Swan put his local militia training to the test and fought at the Battle of Bunker Hill, where he was twice wounded. In 1776, he was promoted

to captain in Colonel Thomas Craft's regiment of artillery. That March, he and his friend Colonel Henry Knox were present on Dorchester Heights among the patriot artillery batteries that shocked and intimidated British General William Howe into evacuating British forces from Boston.

Also in 1776, Swan courted and married Hepzibah Clarke. The daughter of a wealthy merchant, she was considered among the most cosmopolitan, intelligent and erudite ladies in Boston. Her peers considered her quite charming, and she was life-long friends with Henry Knox and Henry Jackson, as well as architect Charles Bulfinch and Harrison Otis. The couple had four children: Hepzibah, Christiana, Sarah and James.

The Swans invested in privateer enterprises during the war, co-owning the ill-fated schooner *Bunker Hill*, commissioned in August 1777 with six cannons, but captured by the Royal Navy in May 1778. Swan also owned the privateer sloop *America* and was an investor in the *Boston*, one of the largest privateers ever commissioned—a hefty 300-ton, three-deck ship that had been captured in 1776 as the British merchant ship *Zachariah Bayley*.

Once the war ended, Swan began to speculate on land in many locations, often buying the confiscated property of Tories in Boston. He owned a considerable amount of lucrative property in Boston, including an estate on Tremont Street once owned by Governor Thomas Hutchinson, which became valuable real estate. Swan also bought the former estate of Colonel Estes Hatch, who upon his death had left it to his son, Nathaniel. The property included 60 acres in the most valuable part of Boston—on the southern side of Dudley Street, near Dorchester.

Swan also became one of the largest landowners in present-day West Virginia. His largest acquisition there was a 500,000 acre tract that straddled the current counties of Logan, McDowell, Mingo and Wyoming, which he had acquired from Philadelphia banker and financier Robert Morris. Swan also bought many tracts of 20,000 to 50,000 acres; it is estimated that he eventually owned six million acres.

Following the American Revolution, the Swans lived at the corner of West and Tremont Streets. This property was later sold and converted into a garden theatre. The house he owned on Dudley Street was one of the old pre-war mansions in the fashionable part of the city. Their equally-fashionable French style home in Dorchester was built in 1796.

The Swans provided lively entertainment at their Tremont estate. Among those who visited were Marquis de Lafayette, their close friends Henry and Lucy Knox and other socially-connected couples visiting from New York and Philadelphia.

On February 25, 1785, Swan bought a large island off the coast of Maine that still pays homage to its early owner with the name, "Swan's Island." He also purchased each of the small islands within three miles of any part of what was then called, "Burnt Coat Island." Swan had acquired approximately 12,800 acres for £1,920.

Swan's acquisition of islands off the coast of Maine might well have been suggested by his good friend, Henry Knox, who owned a vast swath of millions of acres of land along the coast of Maine, with his house located in Thomaston, not far from Swan's Island. Hepzibah's friendship with young architect Charles Bulfinch resulted in his design and the erection of a fine mansion for the Swans on Swan's Island that was done in the French-Neoclassical style. The Knoxes were inspired to emulate the style and size of this mansion with their famous Montpelier, built in 1794 and named in honor of France's support during the Revolutionary War.

Some of these land speculations were apparently not favorable for Swan, and he became deeply indebted during the post-war economic depression, which was at its worst in 1786. However, despite his financial setbacks, one scholar asserts that Swan helped suppress the great manifestation of the financial frustrations of 1786: Daniel Shays' Rebellion in Massachusetts.

The same week that Swan bought his islands, his close friend Knox wrote to George Washington, asking him the favor of sending letters of recommendation and



1808 portrait of Hepzibah Swan painted by Gilbert Stuart. Collection of the Museum of Fine Arts, Boston.

introduction of Swan to both the Comte de Rochambeau and the Marquis de Chastellux, which Washington did on February 28, 1785. Swan used these letters to help open doors to the upper strata of French society.

Before leaving for France later in 1787, Washington's thorough and detailed diary notes that Swan visited him at Mt. Vernon on January 17, 1787. Soon after his overnight stay there, Swan wrote to Washington, indicating he had left him a copy of his pamphlet on financial planning of the United States. Swan's pamphlet, a copy of which he also sent to Thomas Jefferson, was titled, "National Arithmetick [sic]; or Observations on the Finances of the Commonwealth of Massachusetts: with Some Hints respecting Financiering [sic] and Future Taxation in This State."

Swan's financial adventures were just beginning. It was likely soon after his arrival in France in 1787 that either Rochambeau or Chastellux—or perhaps Lafayette—introduced Swan to an aristocrat named Pierre-Gilbert Leory D'Allarde, who would prove a profitable partner prior to the outbreak of the French Revolution in 1789. Swan and D'Allarde established a mercantile business under the name of Swan, D'Allarde et Cie, which initially sold American food products, gunpowder and saltpeter used in making gunpowder to the French army.

By the late 1780s, France had suffered several years of harsh droughts and subsequent poor harvests, requiring the importation of fundamental food. Hunger suffered by both the rural and urban poor helped incite the French Revolution,

including the bread riots led by women who marched from Paris to Versailles in protest.

Swan made formal proposals in French and English that he shared with the French government's leadership, as well as US Secretary of State Thomas Jefferson. The proposals were written on July 7, 1788, just under a year before the storming of the Bastille in Paris on July 24, 1789. Swan proposed to sell the French wheat, beef, sheep and other food with the following schedule of payment:

Payment to be made in specie, but in order to encourage the use of French articles in America...the contractors will hold themselves bound to take 15% of their payment in wines, brandies, and French products in the first year, 25% the second year, and each year afterward during the life of the contract an additional 2½%, the amount of supplies to be augmented in similar manner by an additional 2½% each year after the second year.

In 1789, Swan sold large shipments of wheat and other food from the United States to help mitigate the hunger in France. In the course of the multi-year revolution that unraveled into radical turmoil, Swan's partnership with D'Allarde dissolved, as noblemen such as D'Allarde became *persona non grata*. The revolution created an increased demand for alcohol in France, as well as an opportunity for the creative capitalist Swan to open a rum distillery outside of Paris in Passy.

By 1794, Swan's skills as a merchant and potential government liaison between the United States and France had become well-known, as a letter from James Monroe to James Madison on September 20 attests. Monroe informed Madison that Swan had resided in France for "some years" and noted that his return to the United States was impending. After almost seven years abroad, Swan returned home in late 1794.

Based on a series of memoranda Swan addressed to the French *commission des subsistances* at the Archives Nationales in Paris, Swan suggested the commission pay him not with specie the French could ill

afford to export, but instead with a barter system of fancy French goods—particularly furniture—of which there was a glut, likely due to changing tastes in which the revolutionary-minded French discarded items reminiscent of the Bourbon dynasty headed by the soon-to-be beheaded Louis XVI. Swan correctly ascertained that there was now a market for fine furniture, statues, mirrors and clocks from the former mansions of the nobility, along with silks, satins and laces.

Swan urged the commission to maintain secrecy involving all such commercial operations. An example of such secrecy put into action was Swan's merger with a Swiss banker from Zurich names Johann-Caspar Schweizer, who had long been based in Paris. This merger was not Swan's idea, but instead an appointment by a new version of the commission responsible for commerce. To keep this merger more secretive, Swan and Schweizer were referred to in official correspondence as "Jones & Gaspard." In addition to the aforementioned luxury goods, Swan and Schweizer were occasionally paid in gold, as a result of the melting down of ecclesiastical ornaments and other confiscated objects seized by an increasingly-radical and secular French government.

When Swan returned to the United States in December of 1794, he soon established the headquarters of Swan and Schweizer at Philadelphia, probably because it was the nation's capital and had the highest concentration of wealthy people who could afford the French luxuries. Swan also set up shops in New York, Baltimore, Charleston, South Carolina, Newport, Salem and Boston. This was partly to take advantage of each region's predominant product that could be used by France, such as rice from Charleston; fish from Boston; and flour, cornmeal, beef and pork from the various other ports.

The influx of formal French furniture and other goods into Boston by Swan largely explains the existence of a "Swan Suite" at the Museum of Fine Arts in Boston, which features very formal and gold-gilt covered French furniture and the portraits of Swan and his wife painted by Gilbert Stuart.

In January 1795, the French government provided an important credit at the disposal of Swan and Schweizer. The committee of public safety declared that Swan was empowered to negotiate for a final liquidation of the debt of the United States to France, and to employ these funds for the purchase of food for France.

Alexander Hamilton's financial policies facilitated the commencement of regular payments of the US debt to France in 1790, but the final payments would not be made until 1802. The French leadership declared they could not wait that long, due to political desperation and the dire need for food and other key necessities.

Swan was at the right place at the right time. He wrote to Oliver Wolcott, Jr., who had succeeded Hamilton as Secretary of the Treasury, a half-dozen times in May and June of 1795. In the initial letter he wrote, in part:

...Enclosed I have the honor of transmitting you the original of an Arrêté or Decision of the Committee of Salut public, or public Safety of the National Convention of the 25th January last,... by which you will perceive that the debt of the United States to France, is put at my disposition, and that I am authorized to finally liquidate the said debt and receive the reimbursement of it from these States.

In an agreement signed on June 15, Wolcott, representing the US government, agreed to pay Swan, as agent of the French Republic, US stock certificates valued at \$2,024,900—the amount owed to the French that included principal, interest and arrears.

Several days later, Wolcott wrote to Hamilton, asking for his advice regarding Swan, even though the agreement had already been signed:

This Mr. Swan has proposed to me to contract to pay our Interest in Specie in Holland & when done to receive payment here at par. He ha(s) immense funds at command here & as he says in France. (His) ability cannot be doubted. (All the) objections

which exist will occur to you. Supposing I contract with him & at the same time authorize our Comrs. to draw on the Treasury, if he fails to comply—will the provision be adequate or what better can be done? The shipment of produce is impracticable. The French Agents command everything & the risque & probable loss would be immense. On this point will you drop me a line soon.

In essence, Swan had just bailed out the United States' debt with France and was able to turn his bailout into a profit for himself, further resurrecting the financial and social standing he had enjoyed after marrying the wealthy heiress, Hepzibah, back in 1776. \$

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TRACKING STOCKS

RISE, FALL, REVIVAL

By Lawrence A. Cunningham and
Patrick T. Brennan

TRACKING STOCKS, corporate equity of a parent tied to the economic performance of a subsidiary, were the 1984 brainchild of Georgetown University tax professor Martin D. Ginsburg, late husband of Justice Ruth Bader Ginsburg. Professor Ginsburg's design, still used to this day, solved a problem for H. Ross Perot, the colorful Texas billionaire.

In 1984, when General Motors Co. (GM) acquired Perot's company, Electronic Data Systems (EDS), he and his many employee-shareholders were concerned that EDS's performance would be lost within the GM behemoth. They wanted to ensure that any outperformance of EDS would be rewarded regardless of how the rest of GM performed. The solution: they accepted shares in GM, but performance was tied to the economics of EDS, aptly dubbed "Class E stock."

Ginsburg's invention was so effective that GM copied it the next year when acquiring Hughes Aircraft Company—using currency dubbed GM "Class H stock." Both trackers remained in place for more than a decade until GM spun the companies off, distributing all of GM's stock in them to GM shareholders to form freestanding companies.

GM's tracking stock worked well for all concerned, especially Perot, who showed his gratitude by endowing a professorship at Georgetown: the Martin D. Ginsburg Chair in Taxation. While Ginsburg's legacy extends far beyond tracking stocks, this contribution has had a volatile history: initial plaudits and proliferation by the dozens, followed by widespread criticism and unwinding of nearly all and, of late, a renaissance—and another spotlight on GM.

PROSPECTUS

Liberty Media Corporation Split Off from AT&T Corp.



We are currently a wholly owned subsidiary of AT&T Corp. This prospectus is being furnished in connection with our split off from AT&T and the issuance of our Series A common stock and Series B common stock in the split off. Our businesses and assets and those of our subsidiaries constitute all of the businesses and assets of AT&T that are attributed to AT&T's Liberty Media Group, which was created in connection with AT&T's acquisition of our former parent company.

AT&T is effecting the split off pursuant to the terms of its charter. AT&T's charter enables it to redeem all of the outstanding shares of its Liberty Media Group tracking stock, which is a class of common stock of AT&T that is designed to reflect the economic performance of AT&T's Liberty Media Group, for shares of our common stock. The redemption will be effective as of 9:00 a.m., New York City time, on August 10, 2001, which we refer to as the redemption date.

In the redemption, you will be entitled to receive:

- one share of our Series A common stock in exchange for each share of AT&T's Class A Liberty Media Group tracking stock held by you on the redemption date; and
- one share of our Series B common stock in exchange for each share of AT&T's Class B Liberty Media Group tracking stock held by you on the redemption date.

As a result of the redemption, we will issue 2,376,765,123 shares of our Series A common stock and 212,045,288 shares of our Series B common stock, based upon the number of shares of AT&T's Class A Liberty Media Group tracking stock and AT&T's Class B Liberty Media Group tracking stock outstanding on February 28, 2001, and assuming no exercise of outstanding stock options or warrants.

No stockholder approval of the split off is required, and none is being sought. We are not asking you for a proxy, and you are requested not to send us a proxy.

There is currently no trading market for our common stock. We have applied to list our Series A common stock and Series B common stock on the New York Stock Exchange under the symbols "LMCA" and "LMCB", respectively.

In reviewing this prospectus, you should carefully consider the matters described under the caption "Risk Factors" beginning on page 13.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Please contact our information agent, D.F. King & Co., 77 Water Street, 20th Floor New York, New York 10005, (800) 207-2014, if you have any questions or inquiries with respect to the split off.

The date of this prospectus is June 14, 2001.

Prospectus of the Liberty Media Corporation, split off from AT&T Corporation, dated June 14, 2001.

Although the story began with Ginsburg and Perot, it stars a third figure, who has issued more trackers than anyone, a quarter of the total ever created, representing an even larger share by value: John Malone, the maverick billionaire known as the “cable cowboy” for pioneering consolidation of that industry and as a financial engineer.

Malone, a Ph.D. in operations from Johns Hopkins University, fostered the rise of tracking stocks, employed them rigorously despite their fall from favor and today leads their revival. He and his shareholders have benefitted so greatly that they may wish to endow another chair honoring Ginsburg. Yet trackers remain misunderstood, as a recent proxy contest involving them at their birthplace, GM, attests.

Ginsburg's Model

When corporations issue stock, stockholders enjoy many rights against that issuer; boards control the whole and owe associated duties to all stockholders; and governments levy associated taxes. Ginsburg devised a tool to splice rights to different shareholder groups, without relinquishing board prerogatives or repudiating duties, and deferring tax consequences. In effect, the Ginsburg tracking stock structure amounts to “internal spin-off” — separation without divestiture.

To secure this treatment, the terms of tracking stock put parental control in its board, provide mechanisms to track the economic performance of the targeted business and set policies for dealings between parental units to be at arm's length. Boards often adopt dividend policies based on cash flows of targeted businesses, retain power to convert tracking stock into the parent's common stock (an “unwind” feature) and pledge to redeem the stock upon the sale of the tracked business's assets. Otherwise, tracking stock terms are the same as the parent's ordinary common stock, on matters such as voting rights and rights upon parent liquidation, although some variation is possible.

Exact advantages of tracking stock structures vary depending on the specific features of the various businesses and how they interact. Benefits may include offsetting tax benefits when one business generates substantial taxable profits while another incurs substantial losses;

combined balance sheet strength equating to lower borrowing costs; immunization from antitrust laws that might prohibit two independent businesses from coordination that is perfectly legal among business units of the same family; and adding incentives for managers to enhance the performance of businesses they run by compensating them in their own tracking stock.

Trackers' Rise

The Ginsburg model, tailor-made for GM's acquisitions, was soon adapted to other settings. In 1991–92, US Steel Corporation enjoyed synergies through common control of such diverse subsidiaries as Delhi Group and Marathon Oil, which shared gas-processing plants and enjoyed lower borrowing costs together than if independent. But the businesses had distinct economics so that a tracking stock would keep the advantages of common control and increase visibility into the tracked business with gains for stockholders and managers alike. The solution worked for a decade until USX spun Marathon Oil off.

In 1995, after the government's anti-trust break-up of AT&T, US West was a regional telephone company which also owned cable and cellular assets. Investors attracted to the stability of the telephone utility might recoil at the volatility of media assets; those seeking rapid growth would have opposite tastes. Trackers satisfied the demand of each while housing all operations under common control, harvesting related synergies. To further meet investor tastes, the utility side would pay regular dividends as the media side would reinvest earnings. And the arrangement could be unwound as circumstances changed. In fact, in 1998, after synergies proved elusive, US West spun off the media business.

In the mid-1990s, Malone used trackers not only as acquisition currency as in the original GM deals, but also to segment the economics of diverse media assets he had been acquiring through TeleCommunications Inc. (TCI). In addition to other advantages ranging from antitrust to tax, Malone identified synergies among the businesses as well as interdependence — cable assets along with programming, for example, better combined than separate, but sporting vastly different economic attributes. With tracking stocks, that can translate into higher price-earnings multiples that

strengthen their value as an acquisition currency compared to the parent's straight common stock.

The TCI transactions were distinct in both complexity and boldness, which drew critics. Law professor Jeffrey Haas referenced conflicts between siblings that all parent boards using trackers face. TCI's prospectus said as much, then simply avowed confidence in its directors' ability to discharge their duties. This amounted to an “implicit message of ‘trust us,’” Haas complained, urging such boards to establish structural cures, such as independent committees. But no governance devices can resolve such problems, and one truth about trackers is that, to work, the parent's board must be trustworthy.

Trackers, after all, are not for every company, as a 1999 McKinsey research report highlighted. The researchers documented several advantages of trackers, including expanded analyst coverage (observing a 25% increase) and drawing new investors (finding only 27% ownership overlap of the parent and the tracked subsidiary). They found a 12% increase in return on invested capital, which they attributed to new parent ability to “offer manager incentives tied to the market performance of the divisions they run” and to “push management accountability deeper into the organization.” Above all, the McKinsey authors stressed that successful trackers require a compelling rationale.

Stumble and Fall

As investor Bill Ruane once lamented, “On Wall Street, the process goes from innovation to imitation to irrationality.” The same held for trackers, as they proliferated in the late 1990s technology sector amid irrational exuberance fueling a bubble. A common theme featured a traditional company offering trackers in an Internet subsidiary: bookseller Barnes & Noble for e-tailing operations; The Walt Disney Company with Go.com; brokerage firm Donaldson, Lufkin & Jenrette for its online trading business, DLJdirect; and publisher Ziff-Davis for its online operations, ZD.net.

Nearing a peak, in mid-2000 about 30 listed trackers traded — half issued during the bubble — and several then pending were soon aborted, including for DuPont Co.'s life sciences business; *The New York*

Times online; and Staples.com. Others soon wound down, including at Disney and DLJ (then owned by CSFB). While the market for tech recovered, the appetite for trackers remained dim. Although a few trackers launched in 2001 and 2002, none debuted during 2003 or 2004.

Skeptics included luminaires from the value investing world, such as Columbia Business School professor Bruce Greenwald and *Wall Street Journal* veteran Roger Lowenstein. They challenged many companies' trackers as merely "putting lipstick on a pig" or "rearranging deck chairs on the *Titanic*." Devotees of efficient market theory would contend that businesses are not incorrectly valued simply due to ownership structures.

During the bubble, many companies used trackers less to solve a knotty business problem—which could as easily be resolved by separate audited financials—than to follow or foment frothy market values. Many issuers lacked the compelling rationale that makes trackers suitable—such as operational synergies, interdependence, tax efficiency or acquisition opportunities. It was not enough to repeat versions of the US West story—which had in any event faltered, as did many others.

But despite the broad retreat from trackers, Malone saw them as an ideal solution for numerous challenges he faced managing Liberty Media, the company he has run since it was spun off from AT&T in 2002. Liberty was a complex group of diverse media assets needing simplification. Malone began by spinning off two businesses—a collection of international media assets and a 50% stake in Discovery Communications. Still, Liberty Media perceived continued stock market undervaluation—by as much as 70%.

So, in 2005 it created trackers, Liberty Interactive (LINTA) and Liberty Capital (LCAPA). LINTA was anchored by Liberty's 98% interest in QVC, the television shopping channel and strong cash generator, and included the company's 22% interest in Expedia, the online travel agency, and a 20% stake in IAC, owner



Michael Armstrong (left), chairman and CEO of AT&T, and John Malone (right), chairman and CEO of Tele-Communications Inc., at a press conference announcing the merger of their companies, June 24, 1998.

HENNY RAY ABRAMS / Springer

of such companies as Ask Jeeves and Ticketmaster.

LCAPA would house all other assets, including, as the prospectus explained, "video programming and communications technology and services involving cable, satellite, the Internet and other distribution media as they evolve"—in other words, anything telecom related. These assets included a variety of businesses and securities, such as the wholly-owned Starz and On Command; the partly-owned FUN; and public equity in Motorola, News Corp., Sprint and Time Warner—the latter accompanied by a variety of complex hedging instruments.

Liberty thus created two sets of assets of appeal to different groups of investors. Those who favored predictable cash flows from QVC and other straightforward stalwarts would be more attracted to LINTA; those wanting to bet on Malone's record of buying and selling a variety of diverse media assets and financial hedging transactions could gravitate towards LCAPA. The tracking stock format got investors to value the securities, providing insight to Liberty management, who obviously had the best knowledge of underlying asset value, but would benefit from investor signals in pinpointing more effective share buyback programs.

The tracking structure also created a currency for future acquisitions, an especially appealing feature for an acquisitive company like Liberty Media. This proved valuable by 2008 in the depths of the financial crisis, when LCAPA acquired satellite radio operator SiriusXM. With

a total return exceeding 38 times its initial investment (to date), this is among the most successful investments of the century, outdoing even those famously executed during the crisis by Warren Buffett. Other benefits of trackers also appeared, including tailored executive compensation, all debt remaining at the parent level minimizing associated costs and the capacity to recombine or spin-off the segments as circumstances warranted.

Critics would say that if parent stock is undervalued, a board can intensify buyback programs until corrected,

and if a company is too complex, it should be simplified. On the other hand, Liberty had tried both buybacks and spin-offs, but undervaluation persisted. Costs of the tracking structure include internal managerial resources to design and implement it, along with external costs of educating analysts and investors on the rationales. But these costs are not great and, if the program fails, it can readily be unwound, also at modest incremental cost.

The issue came down to a venerable debate, whether trackers are mere financial engineering—in the purely negative sense of doing nothing to increase underlying fundamental value—or a financial achievement that increases value by deftly combining assets to cater to differing investor appetites for discrete segments. Given the dot.com experience, the verdict for almost all companies was in, but for Malone and Liberty Media, the jury was out.

After all, the same critical logic would denounce spin-offs, yet history proves their value—and, for that matter, the dot.com era aside, history had proven the value of trackers, as the McKinsey study showed. Today, history appears to be on the side of trackers: in 2008, the *Wall Street Journal* declared them "relics" on the "verge of extinction." In 2016, tax lawyers from Fried Frank—where Ginsburg once worked—proclaimed, with apologies to Mark Twain, that reports of the death of trackers have been "greatly exaggerated." A new wave of trackers is emerging capable of offering compelling rationales.

Revival

In 2013, Fantex, whose business consists of separate branding contracts with professional athletes, offered trackers tied to the economic value of those contracts. In 2014, Fidelity National Financial Inc., a title insurance company with an investment strategy focused on individual businesses, offered trackers tied to its core business as well as those investees. In 2016, Dell used tracking stock as part of its purchase of EMC Corp., tracking EMC's 80%-owned subsidiary, VMware, Inc., a publicly-traded software company.

Researchers at Merrill Lynch in 2016 published a paper similar to the McKinsey study two decades earlier, with updates. It identified all the familiar benefits, as well as the costs, and it stressed that trackers are only advisable when a company can offer a compelling rationale. It devoted a full page to depicting nearly a dozen Liberty Media trackers, and wrote: "The tracking stocks and spin-offs issued by Liberty from 2004–2015 have resulted in an out-performance vs. the S&P 500 Index of >200% for the Liberty investor."

Liberty is distinct in at least two ways that may explain some of its unusual success with trackers. Malone is the controlling shareholder, a status that diminishes shareholder criticism for adopting a tracker, or for terminating one, seen as ineffective. The problem of conflicts also differs. True, Malone and other directors face challenges allocating assets and opportunities among the parent's tracking stocks, and personal holdings may skew judgments. Yet because the team has for decades successfully led their dynamic and financially innovative corporate behemoth, they enjoy a vast reservoir of shareholder trust.

In 2017, the highest-profile non-Liberty consideration of a tracking structure occurred, at the birthplace of them all, GM. Finding GM's stock persistently undervalued, shareholder David Einhorn proposed trackers, with a twist. Rather than tying performance to subsidiaries, such as US versus China or manual automobiles versus autonomous, this proposal offered menus tied to relative investor appetites for growth versus yield: one entitled to quarterly dividends and the other to capital appreciation based on retained earnings. Although the term "tracking stock" was not used, charts in

the supporting presentation highlighted numerous tracking stock precedents, from US West in 1997 to three from Liberty Media. In addition, Einhorn's slate of director nominees included Leo Hindery, former CEO of Malone's TCI.

GM's board rejected the proposal as an "experiment in financial engineering," and GM shareholders voted it down. Opponents cited as weaknesses the same argument Einhorn called a strength: that it would not affect manufacturing or profits but would promote clarity and accurate pricing. Certain shareholders opposed the structure because they preferred GM stock to be undervalued rather than accurately priced. They cited Buffett's admonition that long-term shareholders should prefer discounted prices to enable purchases with a margin of safety. But the financial history of trackers suggests something else afoot: trackers only work when there is a compelling rationale that management believes in and where shareholders trust management to execute it. **\$**

Lawrence Cunningham, a professor at George Washington University, and Patrick Brennan, founding portfolio manager of Brennan Asset Management LLC, are working on a book about John Malone and financial innovation under contract with Columbia University Press. Cunningham is also an editorial board member of Financial History.

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The Four Horsemen of American Finance



Reflecting on the World's Most Important Financial Instruments

By Joshua Tobias Herbstman

THE DEPOSITORY TRUST and Clearing Corporation (DTCC) is undoubtedly the largest financial services company no one has ever heard of. To be sure, those who work in investment finance often have to deal with the DTCC in one capacity or another. But it is surprising how many well-established retail level financial advisors are unaware of who they are or what they do.

So, what is the DTCC? In a nutshell, it is a post-trade clearing settlement firm responsible for the lion's share of financial transactions within the United States. From stocks, bonds and mutual funds, to mortgage-backed securities, OTC derivatives and futures contracts, the DTCC processed some \$1.5 quadrillion in securities transactions in 2015.

Beyond the myriad of clearing and settlement services that the DTCC provides (and there are other institutions that have similar roles within the global financial system), it also serves as a custodian for over \$37 trillion in customer assets. (On a somber note: one five-minute phone call by the SEC to the DTCC would have stopped Bernard Madoff years before his scheme collapsed, as the records would have shown his account to be bare.) The safekeeping functions of the DTCC allow it to clear and settle trades very efficiently. To accomplish this, it employs a network of powerful and sophisticated servers. But this was not always the case.

At one time, trust companies had to process millions of individual paper securities: stocks, bonds and their coupon interest payments. Trades, redemptions, changes of registry, etc.—everything was recorded and transacted on paper. As the global financial system grew, more securities were created and transacted. Daily trading volumes increased. Giant trading

backlogs were constant. Couriers would often hand deliver securities in Manhattan.

Even in the safest of institutions, certificates would get misplaced or sent to a wrong address. Tens of millions of individual interest coupons were hand clipped by employees. The impracticality of paper securities was obvious, although there was (and probably still is) a segment of the investment community that longs for the days of high denomination paper in bearer form.

Today, in an age where billions and trillions are regularly used in describing financial matters, the \$100 bill is the biggest bearer instrument the federal government issues. Gone are the days of the \$500, \$1,000, \$5,000 and \$10,000 bills. Gone are the days of the paper \$100,000 Treasury Bills, \$1,000,000 Treasury Bonds and \$500,000,000 Treasury Notes. You cannot even get a paper Savings Bond anymore save one last option—as a tax refund from the IRS.

This year, America entered the undiscovered country of \$20,000,000,000,000 in national debt. Nearly all of this debt, along with most of our money, is electronic. Of course, it was not always this way. There is a long paper trail of our financial history. America's main debt instruments—the Treasury Bill, Treasury Note and Treasury Bond—were bearer (and registered) securities coveted the world over. And when it came to American currency, Benjamin Franklin had company, in the form of McKinley, Cleveland, Madison and Chase.

The Treasury Bill

In December 1929, the US Treasury introduced a new short-term debt instrument, the Treasury Bill. Known also as T-Bills, these 13-week bonds were zero coupon instruments. They were sold at a discount to par and would be redeemed at their face value upon maturity. Prior to their creation, the Treasury was limited in its

capacity to issue short-term debt obligations. Certificates of Indebtedness were available on the short end of debt issuance, but this facility did not meet the Treasury's revenue needs in the wake of the first World War.

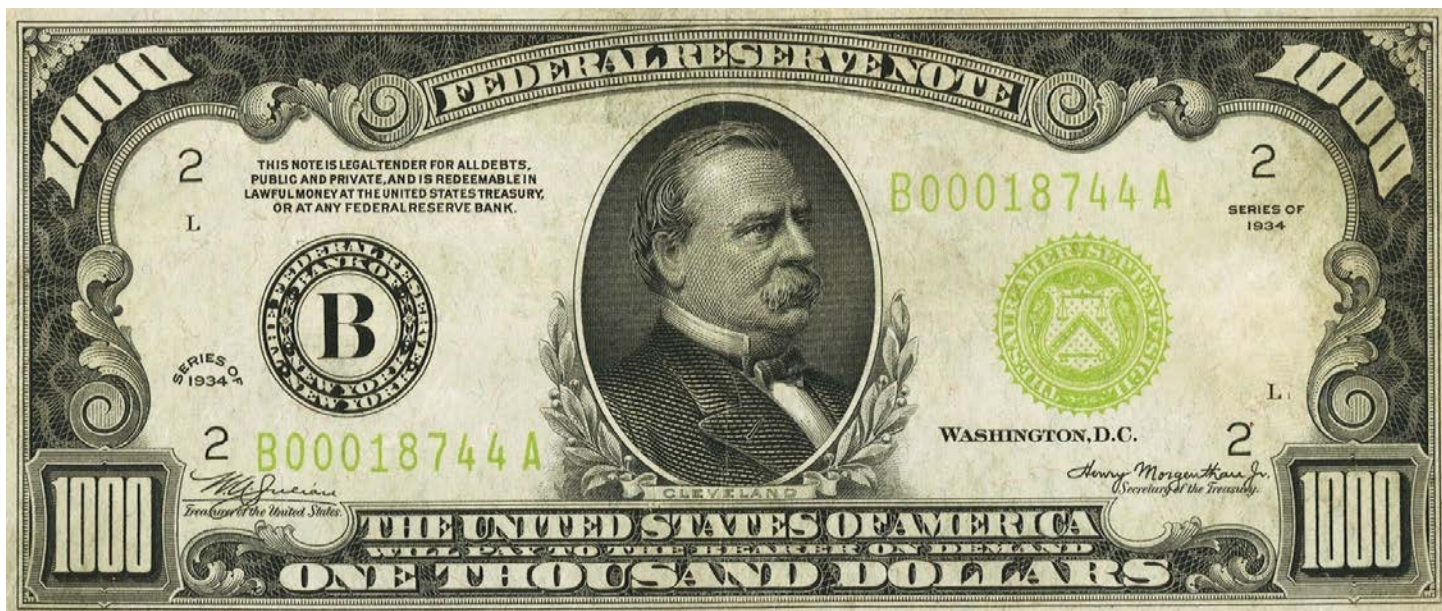
So, in 1959, the government introduced two additional issues: a 26-week security and a one-year T-Bill. During the 1960s, the Treasury made additional changes to the Treasury Bill program. The cycle of quarterly issuance of one-year T-Bills was replaced with a monthly program of auctioning one-year bills instead. As the national debt grew, the Treasury adjusted the minimum denomination of this security. In 1970, the \$1,000 bill was phased out, and the \$10,000 bill became the lowest denominated security. It is worth reflecting on some of the changes happening within the entire Treasury market at this time.

Unlike Treasury Notes and Bonds, T-Bills were never issued in a registered format. The short-term nature of the security meant that endorsing and re-registering T-Bills was not efficient or prudent. In fact, the Federal Reserve, the fiscal agent of the US government, had begun in the mid-1960s to implement a book-entry system for managing the national debt. Converting paper bonds into book-entry securities was challenging, but the advantages of reducing the outstanding registered and bearer paper were ultimately too compelling to do otherwise.

Wall Street firms and banks nationwide had real security and custodial issues with paper bonds. In addition to the aforementioned costs in clipping and processing interest coupons, there were costs in transferring and safekeeping securities, as well as the inefficiencies in trading due to time delays when re-registering bonds. The Treasury Department placed a hold on transferring ownership 30 days prior to a coupon payment.

Beginning in the late 1960s, the marketable debt of the United States began to be

\$1,000 US Treasury Bond, dated August 15, 1978 and due August 15, 2008.



\$1,000 bill, which was phased out in 1970.

Courtesy of The Joe I. Herbstman Memorial Collection of American Finance

transferred into a book-entry system. By 1970, nearly half of the outstanding marketable debt was in book-entry form. Wall Street and the Fed never looked back. The decade saw the precipitous rise of book-entry securities. The last bearer Treasury Bill was issued in 1977, but the end of paper T-Bills 40 years ago did nothing to dampen the demand for these bonds.

By December 1980, the government reported \$216 billion on the books in outstanding Treasury Bills, with an average interest rate of 12.8%. At the same time period a decade later, the total outstanding tab for these securities had reached \$527 billion, averaging a rate of 7.6%. And, as with nearly all things debt-related, time is a financial fertilizer. As of May 2017, the total value of outstanding T-Bills stood at \$1.74 trillion, with a daily trading volume of around \$100 billion.

The Treasury Note

The Treasury Note traces its origins to the War of 1812. The US government needed to raise additional revenue, but there was a problem. The idea of a Hamiltonian central bank had proved unconvincing for many in Congress. Although the Bank of the United States (BUS) proved to be successful in its operations, which included acting as the fiscal agent of the government, political opposition to it was intense. And when the bank's first 20-year charter expired in 1811, it was not renewed.

The timing could not have been worse, as America would be at war with Great Britain a year later.

The government's coffers were insufficient to sustain the conflict, so Treasury Secretary Albert Gallatin proposed a series of interest and non-interest bearing notes to raise needed revenue. (The final cost of the war would total some \$158 million.)

Issued from 1812–1815, these notes were redeemable as payment for government duties and taxes. While they were not technically legal tender, they served a *de facto* role as America's first circulating currency, as merchants and individuals used them in that capacity. Although the low denomination notes were non-interest bearing instruments, they were exchangeable for a 7% stock at the government's discretion. The success of the War of 1812 notes provided a foundation for later innovations in American finance: federally-issued paper currency and short-term hybrid debt certificates.

Treasury Notes also aided the government during the Panic of 1837. Once again, political stubbornness had left the federal government with limited options to address a financial crisis. Despite the lessons learned from the War of 1812, Andrew Jackson was determined to kill off the Second BUS, which had its 20-year charter expiring in 1836. One-year Treasury Notes helped the government through the panic and subsequent financial depression of 1840. But the issuance of

these notes was not without controversy, as again their usage came seemingly close to a federal paper currency (which was not yet authorized by Congress).

Interest-bearing and compound interest-bearing Treasury Notes would play an important role in financing the Civil War. The hybrid debt-currency nature of these instruments was an important feature to the Treasury. As legal tender, the notes would serve as currency, easing the pressure on specie payments from the government's coffers. But the interest-bearing features of these issues meant that investors would withdraw many notes from circulation until their redemption dates, combating the inflationary effects of the Treasury printing paper money.

In the 20th century, the Treasury Note would come to be the Treasury's shorter-term coupon debt instrument. (The T-Bill was a zero-coupon security.) No longer a usable form of legal tender, the T-Note was a traditional bond. In 1919, with the recent end of the Great War, the Treasury issued a fifth Liberty Loan. Known as "Victory Bonds," these four-year securities were Treasury Notes, raising some \$4.5 billion to pay for the war's expenses. A search of the 1919 Monthly Financial Statement of the United States shows notes for the first time under the category of "Interest-bearing Debt."

T-Notes were issued throughout the 20th century, serving an important function in the debt issuance of the federal

government. In the late 1960s, T-Notes statutorily changed to be one- to seven-year maturity instruments. The 1970s saw changes in the competitive auction process, as well as the introduction of the now benchmark 10-year Treasury Note. Like its T-Bill cousin, the age of paper notes was coming to an end. In 1982, bearer forms of T-Notes were discontinued, and by 1986, the last registered Treasury Note had been printed.

Today, the 10-year note remains a bedrock of global finance. In fact, Treasury Notes remain far and away the most popular (and largest) sovereign debt issue in the world. Mortgage rates, car loans and a variety of financial instruments remain highly sensitive to this bond, and the demand for T-Notes remains seemingly insatiable. As of May 2017, outstanding Treasury Notes totaled some \$8.7 trillion, with an average daily trading volume of around \$300 billion.

The Treasury Bond

US government bonds trace their lineage to the time of the American Revolution. Fighting the mighty British Empire would require finance as much as firearms, something the early Continental Congress was forced to reckon with. Of course, borrowing money was not the only way to raise it, and the colonial printing presses did their fair share. The effects of issuing so much paper money caused most of it to devalue quickly, leaving in its wake hyperinflation and an ingrained mistrust of fiat currency.

When it came to borrowing, founding fathers such as Benjamin Franklin and John Adams were able to secure loans from the French government and the bankers of Amsterdam. Between the various Continental obligations issued during the war, foreign loans taken out during the war and paper currency printed during the war, Alexander Hamilton had a full plate when he assumed his newly-created role as Secretary of the Treasury in 1789.

Hamilton was a strong believer in paying the debts undertaken by the new republic, both for moral and practical reasons. America would need to have access to debt markets going forward, and the borrowing capabilities of the government would be directly correlated to its perceived

**“All money
is a matter
of belief.”**

—Adam Smith

creditworthiness. America would pay its bonds.

And did America borrow. The 19th century saw extensive debt issuance. The nation borrowed for everything from the Louisiana Purchase to the Spanish-American War. Treasury Bonds, issued as both coupon and registered securities (and in some cases a hybrid), became a permanent part of American finance. Except for a one-year hiatus during Jackson's presidency, the country has been in debt throughout its entire existence.

With the introduction of a national currency during the Civil War, the federal government needed a robust market for its debt, especially considering the challenges facing the new national bank system. A history of state and local banks printing worthless paper money was not easily overcome in the minds of many. And given the demands for specie, what was going to back the currency of the many new nationally-chartered banks? Treasury Bonds.

Every nationally-chartered bank, no matter how small, would secure its bank notes with government bonds. So no matter the size or lifespan of the bank, its currency (standardized and eventually printed by the BEP) was sound money. Meanwhile, the government got new customers for its bonds—the thousands of national banks that would come into existence. The century ended with some \$2 billion of national debt on the books. And if Treasury Bonds were akin to a young

debutante, then the 20th century would be the grandest cotillion of them all.

The Liberty Loan issuance of WWI saw the Treasury Bond market expand. Over the course of a few short years, the Treasury successfully sold \$17 billion in bonds over four Liberty Loan issues. As mentioned, the Fifth (Victory) Loan was in fact a Treasury Note. The war was a turning point for government debt, the effects of which remain with us today.

The Second Liberty Loan Act continues to authorize Treasury debt to this day. 1935 saw a widespread introduction of non-marketable debt, the US Savings Bond program. And while these bonds helped finance WWII, marketable bond issuance did not slow down.

The Treasury Bond market was a global financial force. The December 1945 Monthly Statement of the Public Debt shows 47 separate T-Bond issues, dating from 1922 onward. The original issuance value of these securities totaled approximately \$120 billion.

As the century progressed, the Treasury continued to issue bonds on the long end of the spectrum. It also experimented with different features. There were 30-year securities, 40-year securities, flower bonds (redeemable immediately at par for the purpose of paying estate taxes) and even a one-time issue of a split-interest rate security.

1981 saw the last bearer bond issued, as all things bearer were coming to an end. Registered bonds followed in 1986, and the age of paper Treasuries was all but over. In May 2016, the last registered long bonds matured. After over 200 years of issuance, marketable Treasury Bonds were no longer on paper. As of May 2017, the outstanding value of T-Bonds exceeded \$1.9 trillion, with a trading volume of over \$100 billion daily.

The US Dollar

The dollar is the only American financial paper left. After two centuries of history, the mightiest economy in world history largely exists in an electronic “cloud”—to use the parlance of our time. For most Americans, cash is a tool for daily transactions. And with the ease of credit/debit cards, it is not uncommon to find working adults with little or no currency in their wallets.

Our printed money today comes into circulation by way of the Federal Reserve System, which buys notes from the Treasury to supply the currency needs of the banking system. Old worn notes are removed from circulation and replaced with newer ones. Of the bills the BEP does print, not all get equal use. In FY 2016, the BEP printed 224,000 \$50 notes and 179,000,000 \$2 notes. Compare that with 1.9 billion \$20s and 1.5 billion \$100 bills.

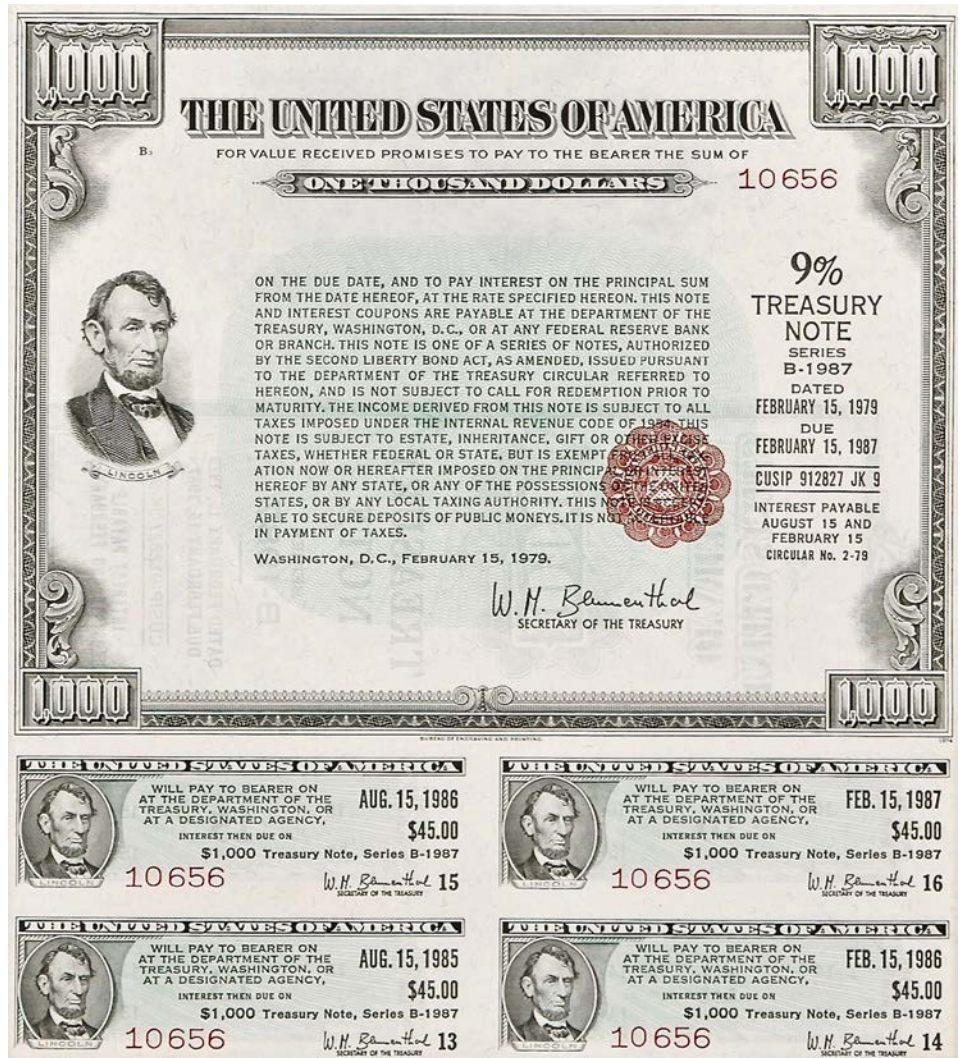
Cash is not what it used to be for many Americans who heavily depend on debit and credit cards for a variety of conveniences: points, rewards, cash back rebates, extended warranties and, of course, the ability to purchase goods and services with borrowed money. But even in the wake of the nation's growing appetite for plastic, the paper dollar still has a very big fan. Namely, the rest of the world.

According to the Federal Reserve, more paper dollars circulate outside the United States than domestically. Not surprisingly, the largest note printed, the \$100 bill, seems to be the favored global import. In 2011, Federal Reserve economist Ruth Judson estimated that nearly two-thirds of \$100s were circulating abroad, continuing a trend of increasing demand for the bills going back to the 1990s.

Financial crises and continued global problems only feed demand for US "greenbacks." The dollar is a safe haven. And when you don't trust your local banana republic bank with dollar deposits, the *paper* dollar is a safe haven. It is fair to say that many nefarious transactions are conducted in dollars, particularly \$100 bills, which is a problem that has plagued governments for decades.

On the one hand, the US dollar is one of the nation's greatest exports. Demand for our currency helps promote America throughout the world, and it keeps the global financial system running smoothly. On the other hand, high-denomination cash facilitates illegal transactions and criminal enterprises. The compromise reached between these competing concerns was settled decades ago. In 1969, the Treasury discontinued the use of the \$500, \$1,000, \$5,000 and \$10,000 bills, ostensibly due to their lack of use. (The last year the BEP printed high-denomination bills was 1945.)

That said, there most certainly would be a strong demand for denominations above the \$100 in today's world. With the



\$1,000 US Treasury Note, dated February 15, 1979 and due February 15, 1987.

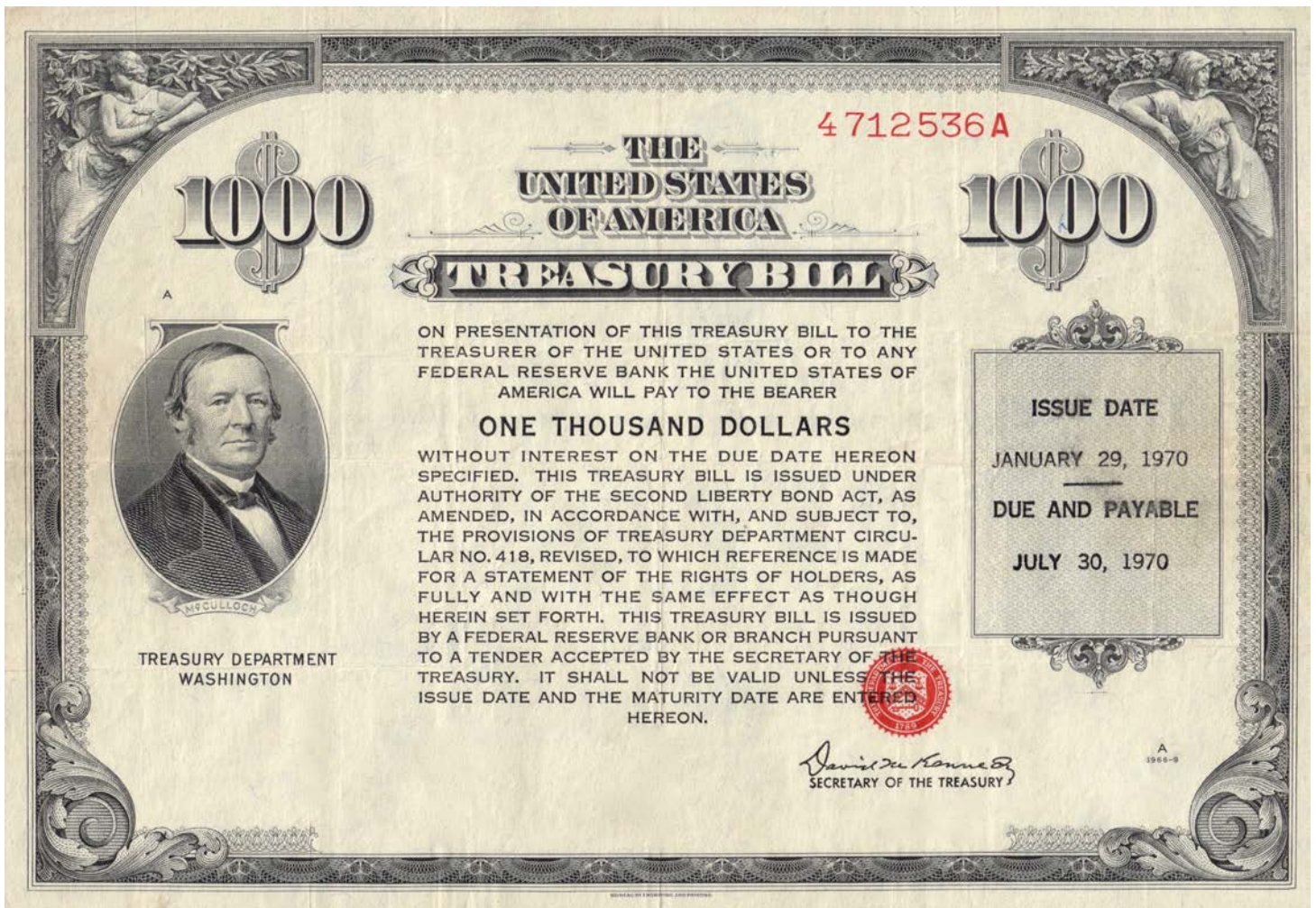
tremendous demand for the \$100 outside the United States, it strains credulity that higher denominations would not also be desired. The problem herein lies in *who* would be desiring these notes, and for what purpose. To be sure, there would certainly be law-abiding citizens that would use larger denominations in a legal manner. And numismatists (money collectors) would enjoy something new to collect. But these legitimate users would pale in comparison to the nefarious elements that would benefit by the reintroduction of these notes.

When it comes to the illicit trade of guns, drugs, counterfeit merchandise and stolen goods, high denomination currency would only serve to aide in such transactions. From terrorist organizations to garden-variety criminal enterprises, governments around the globe are robbed

of tax revenue through the underground flow of cash. Estimates of the dollar volume of global crime are in the trillions of dollars per year.

Even in cases whereby the initial sale of a good or service is made legally, the existence of high denominations could serve to encourage the underreporting of transactions for legal or tax purposes.

The European Central Bank responded to these growing concerns in May 2016. The 500 Euro note, a favorite of money launderers, is no longer being issued, leaving the 200 Euro as Europe's highest denomination. Other nations have taken similar steps in recent years. In November 2016, the world's largest democracy, India, withdrew two of its large denominations: the 500 and 1,000 rupee. Officials in Australia are considering the removal of their \$100 bill from circulation. Canada



\$1,000 US Treasury Bill, issued January 29, 1970 and due July 30, 1970.

withdrew its largest bill in the year 2000: a \$1,000 denomination.

Given the financial and criminal realities of our modern world, the return of larger denominations is a non-starter. There are even calls by some to end the production of the \$100 bill for the reasons outlined above. But no matter the value of the note, the US dollar is an iconic financial wonder. However imperfect our domestic politics, however mind boggling our national debt, the greenback remains the last physically tangible instrument of American financial might and global hegemony.

The Treasury Bill, the Treasury Note and the Treasury Bond remain unparalleled successes in the history of global finance. As of May 2017, the average trading volume of marketable US Treasuries stood at some \$500 billion per day. Consider the number of trading days in a year, and the dollar amounts are simply staggering. Along with the dollar, these powerful horsemen help propel the global

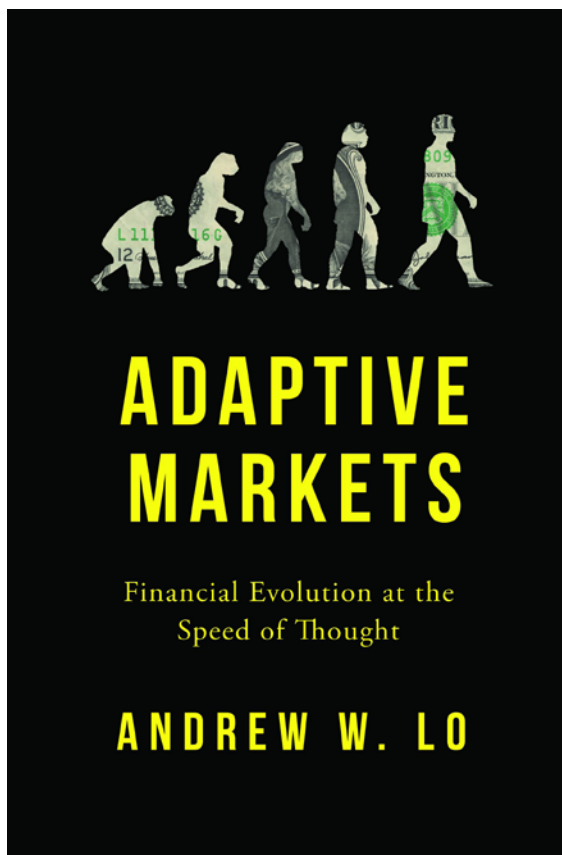
financial system at an ever-increasing velocity. There is no indication that this reality—this reliance on America’s financial instruments—will change anytime soon. The dollar is in great demand, and America’s need to sell its bonds remains inexhaustible.

As President Herbert Hoover once said: “Blessed are the young, for they shall inherit the national debt.” 💰

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Adaptive Markets: Financial Evolution at the Speed of Thought

By Andrew W. Lo
Princeton University Press 2017
483 pages, with photographs,
notes and index
\$ 37.50

THE LAST 15 YEARS OR SO haven't been a good time for modern economic theory. Stuff just hasn't worked out the way a lot of economists said it should. Never-before-seen low interest rates haven't resulted in roaring growth, only a grudging, "meh" recovery. Wages are stuck in neutral, even though we've been at what's called "zero unemployment" for a while. Free trade is out; Smoot and Hawley are in.

This apparent confusion over which economic theories work and which don't also applies to financial markets. As I write

this, equity markets keep hitting new highs, but economists and policy makers are still arguing over what went wrong in 2007–8 and whether the regulatory and monetary responses to the meltdown were helpful or harmful.

Of course, nobody wants to take the punch bowl away in the middle of the party, and maybe economic theories don't matter in the real world. But, what if we are operating our financial system on understandings of behavior that are wrong or out-of-date, and bound to fail again? With all that has happened, do we fully understand what motivates market actors at any given point in time and in diverse environments?

Into this confusion bravely steps Andrew Lo, a distinguished finance professor at MIT, with his book, *Adaptive Markets: Financial Evolution at the Speed of Thought*. Lo challenges some of the financial markets' most dearly held tenets and suggests

how new research into neuro-science and cognitive studies reveal greater insight into market behavior. He posits an Adaptive Markets Hypothesis which, he asserts, might be a path to a truer understanding of how financial markets really work, and how they can be harnessed for the greater good.

Lo spends the first couple of chapters setting out a history of economic theory on financial markets. This includes well-known and more obscure commentators, most of whom came at markets largely by observing behavior and extracting theories which purported to explain why choices were made as they were. This was an inductive process, attempting to discover broad concepts based on observable action. It was by its nature more philosophical and far less data driven than some in the economics world liked.

Beginning around the time of Samuelson, every self-respecting economist

(and certainly those who wanted tenure) had to be mathematically inclined, the more complex and dense the better. Formulas and math took the place of observation and experience. From this came the "lodestones" of financial market thought, namely the Efficient Market Theory (prices reflect all that is known about an asset) and the Random Walk Theory (impossible to "beat" the market over time). Man has evolved into a higher being: *Homo Economicus*—where individuals are always choosing to maximize their economic future.

For Professor Lo, and others such as Daniel Kahnemann and Amos Tversky, these theories are at odds with reality. Too many people, and too many institutions, make selections that do not at all reflect accurate assessment of facts, values and trends. Citing studies large and small, Lo argues that, often times, blind reliance on the certainty of existing theories is a trap. For example, his studies show that the "randomness" of returns—which should track the length of time an investment is held—does no such thing; it actually increases the longer movement is measured.

Unlike many economists, Lo has a human side (he grew up in Queens, after all) which he is not afraid to talk about. Economic actors have emotions, and they often revert to rules of thumb (heuristics) to handle unfamiliar situations. Mechanical, physical or mathematical laws really can't explain how humans behave. Biology, perhaps, might be a better model to explain the complex factors that motivate people regarding risk and reward, pain and pleasure.

Evolution and adaptation are the hallmarks of biology, and understanding these processes give greater insight to how markets and market participants shift and grow. To illustrate, Lo cites work done measuring the brain patterns of traders as they win or lose.

This all leads to Lo's theory of Adaptive Markets, where he suggests a variation/improvement on existing theory. Markets and market participants are not static. They do not act in vacuums. Instead, their

HOW MUCH DO YOU KNOW ABOUT FINANCIAL HISTORY?

TRIVIA QUIZ

current behavior must take into account past behavior, the environment and the pressures that led to that earlier action. This sounds like common sense, but Lo is convinced that it is a start to understanding markets more fully. If we can see markets as continually evolving, we can adapt them "...at the speed of thought."

Taking the Adaptive Markets Hypothesis into the real world, Lo cites hedge funds as an example of how rapid evolution through feedback and change is necessary for survival. Looking forward, we must subject some of the most cherished market theories—risk premiums, indexing, long-term investing, liquidity, etc.—to new thinking in light of what he calls the "Great Modulation."

His theory, he contends, can be applied to study market failures, fraud and new approaches to regulation. The market should be viewed not as a machine or process, but as tightly-connected ecosystems requiring more nuanced analysis than in the past.

The book gets technical in places, but Lo has a light approach to making his arguments. He also has an apparently inexhaustible supply of behavioral studies to support and illustrate his points. His handling of Madoff's treachery is out of place here: no economic theory is needed to explain a thief, no matter how spectacular his crime.

These are difficult days for capitalism and free markets; more pessimistic than I've ever seen. Lo is an optimist, however. For him markets, if properly understood, can be engines for good. He paints a hopeful picture of how markets—adaptive, evolving and improving—can help solve some of our most critical challenges in health and economic opportunity. Let's hope he's right. **\$**

James P. Prout is a lawyer with 30+ years of capital market experience. He now is a consultant to some of the world's biggest corporations. He can be reached at jpprout@gmail.com.

1. In what year did Alexander Hamilton present his Report on the Public Credit to Congress, in which he proposed that the new nation take over the debt of the individual states from the Revolutionary War in support of a federal government?

2. Whose mission is to promote economic growth and stabilize prices in the United States?

3. What was the first credit card in the United States?

4. In what year did the Dow Jones Industrial Average begin tracking the values of the top US companies in order to track the general movement of the stock market?

5. Which financial publication was first published on July 8, 1889, and sold for two cents?

6. How did the US government pay France for the Louisiana Purchase?

7. Who will be included on the back of the redesigned US \$10 bill in 2020?

8. What brothers invented the cash register in 1878?

9. What children's service organization was depicted on a US quarter in 2013?

10. Who is known as the "father of value investing" and mentor to Warren Buffett?



1. 1790 2. The Federal Reserve System 3. Diner's Club 4. 1896 5. The Wall Street Journal 6. With US Treasury Bonds 7. Sojourner Truth 8. James and John Ritty 9. The Girl Scouts of America 10. Benjamin Graham

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